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HISTORY OF EDUCATION

BY

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AUTHOR'S PREFACE

EDUCATION is the effort of society to impress its ideals upon the thought and activity of the young. It is, therefore, both a result and a cause: a result, because every type of civilization produces its own peculiar type of education; a cause, in that it tends to maintain and promote the form of social life in which it originated. It conserves the mental achievements of the past, and progresses with the expanding life of nations and the race.

The general progress of civilization is from small and simple organizations of men among whom there is but little differentiation of thought and occupation, but little freedom of the individual, to large national unities which protect and foster the individual in the enjoyment of almost unlimited scope for the development of his personal endowments. A clan is at one end of the line, a great republic at the other. The student will do well to keep this fact in mind, however irregular the progress of humanity has been, and carefully note the changing character of progressive peoples and the changing relationship between social bodies and the individual.

The intelligent study of the educational systems of nations and other social units must necessarily be based upon a fair knowledge of the other phases of their development. The student should familiarize himself with the principal physical and human factors that have contributed to the evolution of their peculiar genius and with the facts that reveal it, and should especially

endeavor to discover their causal relationships. Until he begins to recognize these, he is still but in the primary stages of historical study.

This volume is intended to be neither an outline of the philosophy of educational development nor a congeries of educational facts however interesting, but such a presentation of the most important events in the history of education as shall keep constantly before the student's mind the true character of its evolution, and, particularly, enable him to understand the genesis and nature of existing institutions, principles, and methods.

There is given no account of education among primitive tribes, for that is not education in the accepted sense of the term. Among such tribes there is little more than traditional training in the manufacture and use of a few crude household utensils, a few simple implements for war and the chase, and informal instruction in superstitious beliefs and practices that fill the lives of learners with fear and wonder.

The Chinese and Persians have contributed nothing, and the Hindus but little, to the development of Western education, yet their educational systems are described as comprehensively as possible in so brief a work. The reason for this is that the systems are very interesting, and that their development was so simple that the understanding of them is easy and serves as a helpful introduction to the study of the advanced and complicated systems of the more progressive peoples.

To the teacher the study of the history of education brings three valuable results. It widens his professional horizon and makes him feel the dignity of his calling.

It gives him true pedagogic perspective and enables him to estimate accurately the value of courses of study and methods of teaching. It inspires him, for the great teachers with whom it makes him acquainted were sacrificial high priests who mediated to the world its higher life, and they themselves were the sacrifices.

EDITOR'S PREFACE

THE history of education is a vital part of the race's record of its own advancement. It is a record of the prophetic provision of the race to achieve its ideals. It is the conscious attempt of one generation to anticipate the intellectual needs of the next and to provide for those needs. In a most significant sense it is a report of race maturity striving to strengthen and advance itself through its immature life. Thus, education is always prophetic. It seeks to give the race the conscious power to advance itself in all material and spiritual interests. The work of each generation in education must be studied not only in the light of the past, but more especially in the light of the future. What has been the effect of the work of education measured in terms of its application? The answer will best interpret the dominant activities in any age.

The great educational movements are racial and not individual. Too much emphasis has been placed upon the work of certain heroic teachers, and too little emphasis upon the dominant educational spirit of the age,—the spirit which bred these leaders and made possible their great work. The history of education must be more than a biographic handbook. It is only in proportion to the race activity that progress has come. One must, therefore, grasp more than isolated effort if he is to think of the problems of education. It is always wise to give the individual reformer and leader his true setting. Immature

students are prone to measure all teaching by the standards they know. They do not comprehend the subtle undercurrents that combine to give force and favor to the work of the one or of the age. One scarcely knows the basis of educational theory until he is able to think the growth of education impersonally. After the race's record is traced, it is well to note the specific effort of the few great souls who caught with teleologic insight the best the racial life made possible; and who, by their writings or by their practice, have made distinct contributions to the vital problems of education.

It is vastly more important that a student should grasp the dominant influences in great national educational movements than that he should know in detail the work of some writer on educational theory. He should be able to lift his thought above the mere concrete activities of the day and see educational movements in the broad general aspects which have dominated the development of the race. In this connection there are some intensely interesting problems upon which he should concentrate himself and from which he should gather distinct and clearly defined guiding principles. He should see, for illustration, how vastly different were the national types of education in Greece and Rome. He should also from this distinction be able to understand why the great Greek spirit of education so powerfully influenced the thinking of the world in all subsequent development. In sharp contrast with this he should see to what extent the utilitarian spirit narrowed and limited the educational forces of Rome. A most interesting study presents itself to the inquiring mind in a contemplation of the struggle

between the decaying national schools and the rising Christian schools of the church. He should see clearly how the triumph of the Christian schools led to the denationalization of education and how for a thousand years a great religious organization in disregarding national types and racial characteristics fought a heroic but unsuccessful battle against ignorance. Following this, a most interesting and important period, marking the reincorporation of the earlier humanities, becomes a fascinating and valuable part of the student's study. In this renaissance period education again becomes national in its types and differentiates itself into numerous special forms, and modern education in emphasizing one or the other of these forms becomes an exceedingly complex study.

To cover in detail the whole field of educational history is beyond the possibilities of the average student of the subject. It would be well after making a survey of the entire field, such as this book presents, if the student were to concentrate his study upon some one great educational movement. He should make an exhaustive study along this chosen line and come to understand in its fulness one special problem, one special fact of the world-power in education. This will become to him the standard of interpretation and the type of later inquiry. It will prevent him from drawing conclusions from superficial study and make him conservative and cautious in the interpretation of other educational theories and movements, and in general it will give him that sane and healthy attitude so essential to leadership in educational thought.

It seems also necessary to refer to the great paucity of good literature upon the subject of education and to express the hope that as this subject becomes increasingly prominent in the curricula of the various higher institutions of learning in the most enlightened countries that teachers will possess themselves not only of the present meagre literature, but that their earnestness for additional material will lead in the near future to the publication of important original pedagogical doctrines. Perhaps enough is now being said about educational reformers, but it is manifest that too little is placed before the minds of the teachers from the sources themselves. In harmony with the latest and best pedagogical insight relating to the teaching of all history it is hoped that in the near future source-books will be placed at the disposal of the students.

To the younger student the distinction between an educational writer and a real teacher should be clearly drawn. One must avoid the fatal pitfall that all too readily entraps many young minds and leads them to think that all that has been written upon education rests upon enlightened and extended experience with actual flesh-and-blood children. Too many treatises on education discuss fanciful schemes of education as wrought upon dream children. The pedagogic child has been fully reported. The essential thing is to note clearly what has been done in the actual realm of education by a real teacher in close contact with ordinary children.

This volume is an intelligent and concise presentation of educational advance in harmony with the central functions here set forth. It will be found to be

conservative and thoughtful and fair in its treatment of the various dominant educational influences of the race. The author has made a thorough study from the original sources of the topics he discusses, and his work thus becomes an important introduction for the younger student to the rich and wide field of educational history.

M. G. B.

SAN JUAN July 25, 1901.

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PART I
THE ORIENTAL NATIONS

I

CHINA

IN population and extent of territory the Chinese Empire is colossal. It is larger than the United States, and numbers more than four hundred million inhabitants. In age it is the most venerable of the nations of the earth. Its accepted history extends back about four thousand four hundred years. It was old when nations that for centuries played a prominent rôle in the drama of human life and long ago passed out of existence were still in their youth.

Up to the great modern revolution in China, the most vital fact in its religion was the worship of ancestors. This is a family matter, and the family was the type of the nation. Reverence for the past had the dignity of a religious devotion and the persistent energy of a superstition. In the centuries of its history there had been great changes, but through them all the nation preserved an extraordinary fixedness of character. The main cause for these facts must undoubtedly be sought in lack of intercourse with progressive peoples. At first this was due to location, but later, when modes of travel were improved, it was due to determined purpose.

National
Character.

For this country, many centuries ago, a great patriot, Confucius, formulated a system of laws and moral principles and a body of rites and ceremonies in harmony

with it. The system was static, recognizing but one form of social organization. It was based upon and enjoined respect for the past. Through the natural disposition of the people and the energy of powerful rulers it was adopted as final for the nation. The government was organized in conformity with it, and it was the basis of the education of Chinamen, the soul of their learning.

This learning was diligently sought. It was the necessary requirement for appointment to government offices, and these were the honorable as well as the most profitable positions in the country.

It is claimed that there were schools and colleges in China nearly four thousand years ago. The founding of schools, however, was generally left to private enterprise. The state supported and controlled comparatively few, but it maintained a great system of examinations.

At the head of the educational system was the Hanlin, or Imperial Academy. This was organized in the seventh century. Besides controlling the examinations, some of its members acted as counsellors to the emperor, some had charge of public records, and others superintended the composition of dynastic histories and imperial addresses.

The empire is divided into nineteen provinces. These are subdivided into departments, and these again into districts corresponding somewhat to our counties. For the administration of educational affairs there was in every province a chancellor, or provincial examiner, in every department a sub-chancellor, and there were in each district two residential educational mandarins, or professors.

Twice every three years, the provincial examiner, aided by the local sub-chancellor, held examinations for the first degree in the departmental city. So highly was the degree prized that possibly two thousand applicants competed for it, some of them men sixty or seventy years of age.

Examinations
for the First
Degree.

For the final effort the candidates were shut up a night and a day, each in a narrow cell, and prepared a poem and an essay or two on subjects assigned to them by the chancellor.

Out of the whole number of competitors only about twenty won the degree, Budding Genius. This conferred social distinction and admission to the next higher examination.

Preliminary to these departmental examinations there were others given in the districts by the educational mandarins.

The second degree was that of Promoted Scholar. The examinations for this were held once every three years in the provincial capitals. They were conducted by two examiners sent out from Peking, generally members of the Hanlin. These examinations were very severe. They lasted through three sessions, and might continue nine days. The candidates had to show skill in prose and poetic composition, and prove possession of a thorough knowledge of Chinese history, philosophy, literary criticism, agriculture, military affairs, and finance.

Examinations
for the Second
Degree.

There frequently were as many as eight thousand candidates present at one of these examinations. About one in a hundred was allowed to pass successfully. The

fortunate ones took higher social rank, and were entitled to compete for the third degree, Fit for Office.

The examination for the third degree was held in Peking every three years. It was conducted by members of the Hanlin. It lasted thirteen days. The successful competitors filled the offices of the empire. They were assigned to these after passing two more examinations in the presence of the emperor. The highest on the list in these received the title of laureate, a highly prized honor. About a score of the best were admitted to membership in the Hanlin as probationers. These pursued further courses of study in schools maintained by the government. Some of these schools had courses of study like those in American and European colleges and polytechnic schools. Sometimes a few of the young men were sent to Europe or America to complete their education, so they might be fitted for diplomatic offices.

This system of examinations is the oldest educational institution in the world. It is recorded of the Great Shun, about 2200 B.C., that he examined his officers every third year, and either promoted or dismissed them. As early as 1115 B.C. candidates for office had to show proficiency in music, archery, horsemanship, writing, arithmetic, and the rites and ceremonies of public and social life.

To prepare for the examinations there were many schools. The government maintained a few of these.

More were founded and endowed by wealthy people. Most generally elementary schools were opened by "Budding Geniuses" who either had failed for the second degree or needed funds to continue

Examination
for the Third
Degree.

Character of
the Schools.

their studies. These taught in private rooms, charging their pupils from twenty-five to fifty cents a month.

In the village schools the pupils attended from sunrise till 5 P.M., with the exception of an hour for dinner. The rooms were simply furnished. The teacher had an arm-chair and a table. Each pupil brought with him a writing table and a chair.

On entering school in the morning the pupils prostrated themselves with great reverence before a picture of Confucius and with almost equal reverence before the teacher. Much reverence, indeed, was needed in that bare little room to enable the pupils to endure its dreary monotone of drudgery and the frequent applications of the rattan or bamboo necessary to keep up the energy of their efforts.

There were three stages of study and three corresponding grades of schools. In schools of the first grade the pupil learned to read and write the characters. He also learned a little elementary arithmetic. He committed to memory the *three character classic*, which contains more than four hundred characters, representing over a thousand different words, the *thousand character book*, the *Four Books*, and nearly all of the *Five Classics*. This is a mass of literature as extensive as the Bible.

Schools of the
First Grade.

From three to five years were spent in this work. In all this time the teacher made no effort to explain the literature which the pupils were required to commit to memory, in spite of the fact that the literary language differs from that spoken by the people. How well the first book would be adapted to boys six or seven

years of age, even if it were written in the vernacular, may be judged from the following translation of the opening lines :

Man's commencement of life is such that his nature is radically good.

As to nature, men are mutually near each other ;

Whilst in practice, they are mutually far apart.

Suppose, however, that no education were given to a man,

His nature would then be diverted.

In schools of the second grade the *Four Books* and *Five Classics*, with supplementary works, mainly commentaries and historical works, were translated and explained. Much attention was given also to prose and poetic composition. The writing was done in accordance with approved and prescribed forms, and was very mechanical.

The work in the third grade of schools consisted in the study of general literature and in training in composition. This grading was not always carefully observed.

The text-books used are chiefly the *Five Classics* and the *Four Books*, together with commentaries and supplementary historical works. The *Five Classics*, with one exception, were compiled by Confucius out of the earlier Chinese literature. One historical work he claimed as his own.

The first three of the *Four Books* were prepared by disciples of his to set forth his doctrines, and the fourth is the work of Mencius (372-289 B.C.), who much admired him. So these works all bear the impress of the sage's personality.

Confucius was born in a time of great degeneracy and disorder. The country then had a feudal system. A succession of weak monarchs had so strengthened the nobles that they were almost independent of imperial authority.

Confucius,
551-478 B.C.

Confucius endeavored to improve the state of society by reviving interest in the ideas and customs of the past. He tried to do this in a practical way as an official in his own province. He at first met with some success, but was soon obliged to lay down his office and depart from the capital. With persistent devotion to the interests of his country he wandered from court to court, offering his services and instructing disciples. Rulers were unwilling to adopt his measures, and in his old age he returned disappointed to his native province to die.

The sacred books set forth a comprehensive natural system of morals, elaborated with considerable fulness of detail. They recognize five human relations, those of sovereign and subject, parent and child, husband and wife, brother and brother, friend and friend. These require the exercise of five fundamental virtues: benevolence, justice, wisdom, politeness, and good faith.

Ethical System.

The books abound in excellent precepts. The following are a few of the best:

Do not to others what you would not have done to you.

Pity the widow and the fatherless, and give succor to brute animals.

When you see the right, do it; when you know your fault, correct it.

Kindness must be repaid, but not injury.

One relation the sacred literature passes by,—the relation of man to his Maker. There is no distinct recognition of a living God, who is the source of law and its authority and unfailingly executes his judgments in the issues of life.

The language of the “classical literature” is peculiarly difficult. It differs from the spoken language as much as if it were a foreign tongue. It is monosyllabic and entirely lacks inflections, an ending for the possessive case only excepted. One word may fill the office of all the principal parts of speech. There is no alphabet. Each character represents an idea. These characters are either simple or compound. More than thirty thousand are required for a scholar’s range of thought.

There is profit in the study of the ancient Chinese education because of its direct contrast with modern Western ideals and methods. In an exaggerated way, too, it presents the defects common to nearly all old systems, memorizing a body of literature as authoritative, and supporting a fixed social order. It exalted instruction and authority above discipline and vigor of independent thought.

Aside from the demands of office and the dignity conferred upon learning by the system, there was no interest in education. The old Chinese never learned to educate a man for the man’s sake, as a means of developing the latent resources of his being. As a consequence, women were not taught at all and not more than one man in twenty was able to read freely and intelligently.

The system failed, too, in its moral results. The

Chinese officials, as a rule, lacked moral force and were notoriously dishonest. This was due to the fact that they lacked a truly ethical religion and that they studied their moral system mainly to win social distinction and political office.

It had one good result in that it relieved the empire of much friction. It made the obtaining of office possible for all but the very poorest and secured respect for officials. These formed a cultivated class who considered it their duty to promote culture, and they produced nine-tenths of all the vast amount of literature published in their country.

In 1905, by imperial decree, a modern system of public education was adopted, including universities and normal schools. Immediately there was begun throughout the empire the erection of modern school buildings, and these buildings when completed were well equipped. No other country in the world ever experienced such a radical revolution in so short a time.

HISTORICAL SUMMARY

Examination of officials by the Great Shun	.	.	2200 B.C.
Examination in music, archery, rites, etc.	.	.	1115 B.C.
Confucius, born	.	.	551 B.C.
Mencius, born	.	.	372 B.C.
The Hanlin, organized	.	.	(circa) 700 A.D.

II

INDIA

FOR us a peculiar interest attaches to India. This is due to a number of causes. Among these are its commercial importance, its claims as a Christian mission field, and the kinship of an important part of its population to ourselves in blood and language. The high-caste Hindus exhibit many traces of their Aryan origin, and they have preserved the earliest known form of Aryan speech as a sacred heritage.

The country is rich in resources. It is a coveted prize for which have contended a number of energetic and ambitious peoples. Beginning with Alexander the Great, Greek, Scythian, Mohammedan, Portuguese, and Hollander have in succession conquered, and, for a time, governed and preyed upon all or parts of it. All have left some traces of their presence in the country. British rule began in the eighteenth century.

When the present masters came into possession, they found existing side by side many different forms and degrees of civilization, and every form and degree of the lack of it. A considerable portion of the population was, and still is, Mohammedan. A number of hill tribes maintained, apparently unchanged, the forms of life that had been theirs before the early Aryan conquerors swarmed into the country through the mountain gate-

ways of the Northwest about two thousand years before Christ.

The sturdy civilization of the West, represented by the new rulers of the country, is gradually working great changes in the social life of the people. Among other things there is now a state system of education. To the system belong elementary and secondary schools, colleges, universities, normal and other technical schools. They are supported in whole or in part out of the state treasury. There are also many Mohammedan and Parsee schools, and Christian schools connected with the mission work of various denominations. The mission schools have accomplished a great work, and continue to be influential.

Present State
of Education.

The largest part of the life in India is still Hindu as distinguished from Mohammedan or Christian, or that of the primitive tribes. The distinctive Hindu life is rooted deep in the old Aryan migrations. It is interesting to trace its development under the peculiar conditions of climate and race admixture. Out of it grew a system of education that is now very old. It is this system which the chapter describes. Though it is apparently doomed to pass away together with the caste system in which it is incorporated, it is still possible to talk of both of them in the present tense.

One of the everywhere present and all-pervasive facts of Hindu life is caste. Castes are classes of society rendered permanent by law and custom.

The Castes.

Those of India are directly traceable to race pride and the struggle for race preservation. At the time of the Aryan invasion the dark-skinned and inert

natives far outnumbered their more intelligent and energetic vanquishers. At first there seems to have been considerable intermarriage; but, in the course of time, the population divided into four principal castes,—the Brahmans, the warriors and rulers, the farmers and traders, and the Sudras, or laborers. The Brahmans furnish the professional people, priests, lawyers, and teachers. They are of pure Aryan blood. The Sudras are the descendants of the original inhabitants, and the intervening castes are of mixed blood. A large body of people, known as Pariahs, stand outside of and below the castes. There are many subdivisions of the castes, and some of the older forms have practically disappeared.

Caste is hereditary. It determines the employment of a person and the nature and extent of his education. A man may sink into a lower caste, but he cannot rise to a higher. Sudras are excluded from all education. In the old order of things it was even unlawful to read or recite a passage from the sacred books in their hearing.

Women are regarded as essentially inferior to men, and are also excluded from instruction.

In China education is a thing separate from the religion of the people, unless, indeed, Confucianism may be regarded a religion. This is not the case with the Hindus. Their religious doctrines and practices embrace the whole social system. The main body of the literature taught is considered sacred, and none of it is free from religious conceptions. Their religion involves a subtle system of philosophy, and much effort is made to cultivate this. In the elementary

Religion.

schools there are religious exercises, hymns and prayers, three times a day.

The religion of the early Vedic period was a pure nature worship. The Indian Aryan of that period worshipped the shining sky and other natural phenomena as living beings. This was followed by varying forms of polytheism. Gradually the idea grew in the Hindu mind that all forms of separate existence, including even the gods, unfolded themselves out of primal existence and are destined eventually to return to it again. This form of pantheism at last became the almost universal belief. God, or Brahma, is thought of as impersonal essence, unconscious absolute being, from which all things emanate. All individual, separate existence is pain and sorrow. So the supreme desire of the Hindu mind is to escape the burdens and ills of life through loss of individuality and absorption in Brahma. Penance, charity, prayers, and study are supposed to further the desire.

The sacred literature is in the Sanskrit language. It has proved of inestimable value to scholars in their efforts to solve the problems of Aryan kin-
Language and Literature.
 ships, migrations, and development. Long before the time of Christ it ceased to be the every-day spoken language of the masses, but it has been preserved as the religious language of the Brahmans. Its literature is remarkably extensive. The early sacred writings are in four collections, to each of which and to all collectively the term *Veda*, lore, is applied. They were composed, probably, between 1500 and 1000 B.C. They are supplemented by numerous works containing com-

ments, explanations of religious ceremonies, and philosophical discussions. The earliest *Veda*, the *Rig-*, or hymn, *Veda*, has one thousand and seventeen hymns. The greatest of the Sanskrit epic poems, the *Mahabharata*, consists of one hundred thousand couplets, nearly eight times as many lines as the great Greek epics, the *Iliad* and *Odyssey*, together have.

Elementary schools are generally conducted in the open air under a tree ; in bad weather, under a shed. As in China, learning is almost exclusively by rote. The pupils first learn the letters of the alphabet and their names. They sing these over until they know them well. Then they spell words and syllables until they can pronounce words with a fair degree of readiness, after which they read lessons from their sacred books. The first writing is done in the sand with a stick. After a time the pupils are permitted to write on palm leaves with an iron stylus, and at last with ink on strips of plane-tree leaves fastened together with strings. There is also teaching of arithmetic. The study of arithmetic consists largely in committing to memory numerous tables of operations. In addition to this course of reading, writing, and arithmetic, there is careful instruction in the duties and ceremonies of the caste to which the pupils belong, and in the tenets of their religion.

The discipline is not very severe. In extreme cases only is the rod applied. Sometimes cold water is poured down the culprit's back. Frequently older pupils assist in teaching the younger ones. This suggested the monitorial system to a famous English teacher who introduced it into England.

For the higher learning there were already in very early times Brahmanic settlements called Parishads. The Parishad was a sort of collegiate institute. There were also private schools, and sometimes a young man would make his home with a learned Brahman to study under him.

Higher
Schools.

The course is extensive and thorough, and requires years of study. Some authorities say twelve or more. It embraces sacred and heroic literature, poetry, rhetoric, grammar, law, medicine, theology, philosophy, mathematics, and astronomy. In earliest times the instruction was all oral, and the vast body of material had to be carried in the memory of teacher and pupil. It is a striking comment on Hindu method that even late textbooks were so written as to be easily committed to memory. Some early ones were written in couplets.

The only authorized teachers in elementary or higher schools are the Brahmans. By hereditary right advanced learning is reserved for them. Though the next two castes are not absolutely prohibited by law from taking the higher course of learning, even members of the warrior caste seldom avail themselves of the privilege.

The Teachers.

To the teachers is accorded religious respect. They are not salaried. They receive gifts from their patrons, which they collect at regular intervals in vessels strapped to the waist. Sometimes they receive property, gifts from wealthy admirers.

The scholarly achievements of the Hindus in their enervating climate attest the philosophic character, the keenness, and native energy of the Hindu mind. They

seem to have anticipated by nearly two hundred years some of the best features of Aristotle's logic. More than four centuries before Christ they had a comprehensive grammar of their language. Quite early they computed eclipses and places of planets by means of tables. In the third or fourth century of the Christian era they had excellent treatises on rhetoric. In the fifth century A.D. they had an algebra superior to that of the Greeks. Whether they received help from the Greek algebra is not known. They were able to solve equations having two unknown quantities, and had methods for the resolution of indeterminate problems of the first and second degree. They applied algebra to astronomical investigations. The Arabic system of notation, which has been such an inestimable boon to the Western nations, appears in their literature of the fifth century as an old thing. In fact, the Arabs got it, as well as much of the algebra they taught to the West, from our Aryan kinfolk in India.

The results of the Hindu social system, religious belief, and specific education are easily summed up and not hard to understand. The Brahman is well informed in the traditional knowledge of his caste, fairly well disciplined in mind, proud, and self-satisfied. The majority of the people are illiterate and deemed unworthy of education. Even with the government and Christian church schools added, probably not more than three per cent. of the people attend school.

There is no recognition of a man as a man. He is respected or despised as a part of some stratum of society. He is almost venerated as belonging to the exalted

and ornamental frieze of the social structure, overlooked or leaned against as a stone in the retaining wall, or trodden underfoot as a part of the clay on which it rests.

As in China, there is no recognition of a man's inherent right to be educated for the best of which he is capable. The primary educational law is that each person be taught his place and for his place.

The hope of the lower-caste Hindu is that at the end of life his soul may reappear in a personality of higher caste, until, after a series of transmigrations, it attains Nirvana. His dread is that it may reappear in some still lower form of existence and be still further removed from final rest.

The people generally become patient, docile, peaceable, resigned, and polite. They develop almost none of that ambition for high personal achievement which makes men energetic in character and effective in life. They learn almost nothing of that self-reliance and sense of personal responsibility which are necessary to the performance of duty in the highest sense of the word.

HISTORICAL SUMMARY

Aryan Migration	(<i>circa</i>) 2000 B.C.
Vedic Literature	1500-1000 B.C.
Buddhism	600 B.C.-800 A.D.
Greek Invasion	327 B.C.
Mohammedan Invasion	664 A.D.
Beginning of British Empire	1765 A.D.
System of Government Schools	1854 A.D.

III

PERSIA

AMONG the Aryans that settled in Media and Persia there grew up a civilization very different from that in India. The Persians did not, like the Hindus, become scholars, metaphysicians, and religious re-
Race cluses. They were a sturdy and ambitious
Characteristics. people, and cultivated the active virtues of life. They became farmers, warriors, and rulers.

The land of their choice was designed for the rearing of such men. The southern portions are oppressively hot, but most of the country is high table-land traversed by numerous valleys and mountains. Some of the latter rise to great altitudes. In northern Media even the lowest valleys are from four to five thousand feet above the level of the sea. There the snow in winter frequently covers the ground to the depth of several feet. Nowhere is there to be found the luxurious vegetation of India. Large portions of the country are arid, and the cultivation of even the fertile portions generally requires considerable labor.

Richer lands than their own and just beyond its gateways invited the Persians to warlike enterprise. They
History. conquered a vast extent of territory and founded the greatest empire the world had yet known. In 558 B.C. Cyrus the Great incorporated Media with Persia by subjugating it. By the time of his

death, 529 B.C., he had subjected to Persian domination all the country westward to the Mediterranean, including all of Asia Minor. His immediate successor added Egypt; and Darius, the valley of the Indus on the east, and Thrace in Europe on the west. Egypt bowed to Persian power a hundred years; Hindu, Babylonian, Arabian, Hebrew, Phœnician, Lydian, and Asiatic Greek a hundred more. At last the empire went to pieces under the terrific blows of Alexander the Great.

The religious conceptions that influenced the Persians of the higher classes had a direct bearing upon their education, and are otherwise worthy of special study. They had a higher ethical value than those of any other ancient people, the Jews only excepted.

Religion.

They were a peculiar outgrowth of the early Aryan nature worship, a kind of spiritualization of the old notions concerning the conflict of light and darkness.

The religion is known as Zoroastrianism, because of its founder Zoroaster, an exalted religious teacher who lived probably a thousand years before Christ. It taught one Supreme God, Ahura-Mazda, or Ormazd, Lord All-knowing, as the creator and sustainer. Opposed to him there was an evil one, Ahriman. Subordinate to Ormazd were many good spirits and angels; and to Ahriman, many devas, or evil spirits. Ormazd was the head of the kingdom of light. To him was attributed the origin of all useful plants and animals, the source of all good fortune. Ahriman was the head of the kingdom of darkness. To him were attributed all noxious weeds, hurtful animals, diseases, and misfortunes. There was

constant conflict between them, but the belief was that Ormazd would finally prevail, a notable optimism.

The Persians held it to be the duty of men to engage in the conflict on the side of Ormazd, aiding him by cultivating the soil, destroying wild animals, caring for herds, educating children, subjugating evil passions. To the good was promised a safe passage at the end of life over the bridge spanning the dark river into an eternity of happiness. The evil, it was believed, would fall off in the middle and be swept away into darkness.

Whatever systematic education there was, was undertaken by the state. It was confined to the sons of the nobles. After six or seven years spent under the mother's care, they were placed in training at the king's court or the courts of the lesser nobles. Their preceptors were state officials distinguished for their dignity of character and their services to the state, and priests.

There was no effort made to teach the boys to read and write. Their training was mainly physical and moral. They were exercised in running, slinging stones, shooting with the bow, and throwing the javelin. When seven years of age they were taught to ride. Their horseback training was of the best. They leaped on and off a fast running horse. They practised with bow and javelin on horseback until they could use both with accuracy while the animal was at full speed. To prepare them for military expeditions, they were taken on hunting excursions, sometimes to considerable distances. On these excursions they were subjected to long marches, extremes of heat and cold,

General
Education.

and scanty provisions. This training rendered the boys vigorous and active.

Great pains were taken to cultivate in them the virtues of courage, truthfulness, gratitude, justice, and self-control, the virtues of a manly spirit. Men who had won distinction in the service of the state through the exercise of these virtues were rewarded in the presence of the boys. In their presence, too, were visited upon offenders the degradations and punishments due to a lack of these qualities.

The priests instructed the boys orally in the tenets of their religion.

At fifteen a boy was supposed to enter the period of youth. He was then enrolled in the army, though his training was continued until he was twenty. He was subject to military service till fifty.

Intellectual education was left to the Magi, the hereditary priests of the country. It seems to have included mainly a knowledge of their religious writings, some phases of philosophy, and some astronomy. Their sacred literature is known as the *Zend-Avesta*.

Education of
the Priests.

It is natural to look for noble results from such training as the Persians received. It is possible, too, to trace such results in the records of that ancient life, but they were not sufficient to give permanence to the power and vigor of the race. The culture was too narrow. There was no effort to cultivate the various mechanical arts. The Persians depended on the conquered nations to supply the products of these. There was also, as already noted, a general

Criticisms.

absence of the broadening and refining power of literary study.

Another serious oversight was the failure to instruct the main body of the people. This same oversight manifested itself in an exaggerated form in the management of the empire generally. The conquered people were always treated as tributary states. They were never taught to consider themselves parts of Persian nationality. Even in war they were organized for battle by nations.

There was, however, a weakness in the empire which no education could have overcome. The country lacked geographical unity and compactness. This source of weakness was all the more dangerous because of the effect it had on the rulers of the provinces. No matter how carefully these had been trained in truthfulness, justice, and gratitude, the size and remoteness of their provinces tended to foster dishonesty, intrigue, and rebellion. When to these unfavorable circumstances is added the fact that the conquest of wealth and power generates pride and luxury, it is not surprising to read that the great kingdom went to pieces suddenly, ingloriously, almost ridiculously.

HISTORICAL SUMMARY

Zoroaster	(<i>probably</i>) 1000 B.C.
Defeat of Medes by Cyrus	558 B.C.
Capture of Babylon by Cyrus	538 B.C.
Battle of Arbela and End of Empire	331 B.C.

IV

EGYPT

GEOGRAPHY is not history, yet he is but a superficial historian who fails to recognize the vital relationship of geographical features to human distribution, activity, and character. The thought was crude that led the Egyptians to worship the Nile and turn the main entrances of their massive temples towards the river, but it was by no means ridiculous or contemptible. The Nile made Egypt, and made the Egyptians, too, one of the oldest of all the nations whose records survive. Younger nations that contributed much to the world's expanding life received many of their first lessons in civilization by the banks of the Nile. From there the Phœnicians brought many of the treasures of culture which they so generously distributed, and the stamp of Egyptian genius was evident upon important religious beliefs of the Greeks and upon much of their learning and art.

Egyptian history traverses a long span of years. The fourth dynasty commenced with the rule of Mena, 4235 B.C., according to some authorities. Under this dynasty there was a developed civilization with distinctly marked classes of society. The origin-
History.
ality and skill displayed in the art works of the period indicate a high degree of intelligence and taste. The last native ruler lost his throne 340 B.C. Great works mark glorious periods between. It would appear that

there was considerable educational activity throughout this long series of years, and it did not altogether cease when the last king ended his reign.

The genius of the people was mainly practical. They developed remarkable skill in the administration of public and private affairs. They were among the most dexterous weavers of antiquity. Probably four thousand years before Christ they cut excellent statues out of stone that is so hard as to test the temper of the best modern tools. They manufactured all sorts of glass articles, coloring them richly. They made artificial gems so like the natural stones as to deceive an expert, and jewelry of most elegant design. They were also either very intelligent or very patient engineers. Upon lofty pedestals they placed monolithic shafts seventy and more feet in height. In their temples they erected gigantic columns ten feet in diameter and rested upon them enormous stone slabs, sometimes forty feet in length, to form the roofs of the structures.

In two respects did the Egyptian mind transcend its practical tendencies. These were the wondering awe with which it contemplated the mysteries of life, and the solemn prominence it gave to the thought of death. The former found expression in temples so vast and majestic in proportion as to still rank among the world's wonders, and the latter in the pyramids, the most stupendous funeral monuments ever erected by man.

In ancient Egyptian society there were two classes clearly distinguished from the rest of the population, the soldiers and the priests. They were not strictly castes, as there were no laws regulating

Genius of the
People.

Classes.

their marriages, and they were only partly hereditary; but they enjoyed very special privileges. The priests were distinctively the cultured class, and had almost exclusive control of the higher education.

There was, apparently, no state provision for the education of the masses. There were, however, a sufficient number of private teachers and private elementary schools in the different communities Elementary
Education. to teach rudimentary reading, writing, and arithmetic to the children of such artisans and tradespeople as might be ambitious to advance them socially or to prepare them well for their future occupations.

The office of scribe most generally tempted the ambition of people belonging to the middle class. Scribes were in great demand for the copying of sacred manuscripts and the writing of official documents and records. It is likely, too, that the business transactions of the larger merchants required much writing.

To become scribes, boys after leaving the elementary school placed themselves in charge of scribes in some office. The first part of their course of training consisted in copying and committing to memory legal formulas, letters, and accounts. The matter to be copied was traced on wood or pieces of stone, and the pupil imitated it with a stylus on wooden tablets covered with stucco. He copied and recopied, and the master indicated the corrections on the margin. Later, the pupil wrote on papyrus. There were also exercises taken from books on morals, religious works, and tales. Many tablets with such exercises and corrections have been found in the rubbish piles of Egypt. At a later

period in the course the pupil was put to composing formulas and letters. The higher training of the scribe was received at a temple school. There he was taught arithmetic, administration, law, and the three kinds of writing, demotic, hieratic, and hieroglyphic. It seems to have been possible for a scribe to advance to the priesthood.

The colleges for the higher professional learning were connected with the temples. This learning was confined
Higher Education. mainly to members of the priest class. There was special training for the architects of the sacred edifices, and for the engineers and physicians.

The medical knowledge of the Egyptians was extremely crude. Whatever skill physicians had in the treatment of diseases was strangely mixed with magic and exorcisms. There were, however, specialists for different diseases, and great importance was attached to the profession because the physicians embalmed the dead.

The passion for building and the annual overflow of the Nile developed remarkable engineering skill. Surveyors were in demand to determine boundary-lines obliterated by the inundations. So the two facts made the Egyptians the earliest notable geometers and arithmeticians. Twelve theorems have been found on a single papyrus. In these branches of knowledge they taught the Greeks much, but they never themselves succeeded in giving scientific form to their mathematical knowledge. They worked out each theorem and each arithmetical process separately.

The architects and engineers must also have had considerable practical knowledge of mechanics.

The education of the priests embraced a thorough knowledge of their religion, of ritual and ceremonies, of morals, law, mathematics, astronomy, astrology, rhetoric, and the different forms of writing. Among the ancients they had great reputation for learning. They devised a calendar which was the basis of that adopted by Julius Cæsar. The study of astronomy, like that of mathematics, received impetus from the overflow of the river, as it was desirable to know the time for the recurrence of the phenomenon.

It is probable that some of their religious conceptions were of a high order, but the highest of them, as well as other portions of their learning, were treated as mysteries and reserved for the priests of superior rank.

The principal colleges of the priests were located at Memphis, Thebes, and Heliopolis.

The literature created and studied by the cultured class was extensive. Besides technical treatises, it consisted of letters, books of travel, novels, poems, and moral and religious works. The ^{The Literature.} best known of their religious works is the *Book of the Dead*, containing texts, prayers, and incantations to help the soul in its journey through the underworld to the court of Osiris. Some of the poems and love-stories are fairly good, but the literary merit of most of their works is but moderate.

The best features in the culture of the upper classes did not descend to the masses of the people. Aside from the feeling of awe and reverence inspired by the great temples and the overflow of the Nile, the religious education of the masses was not very elevating.

Many of their religious ideas appear to have been derived from a primitive form of animal worship. For the priests, the sacred animals represented attributes of the deities; but for the great body of the people, they probably always were gods. Even modern Egyptians are grossly superstitious.

In contemplating the surviving monuments of the achievements of this very ancient people, it is easy to exaggerate some things, to belittle others, but there always results a lasting impression of a solemn and wonderful grandeur. The shadows of the pyramids and of the pillars of Karnak rest upon the student.

V

THE SEMITIC NATIONS

ONE important chapter in the history of education has not yet been written. A very interesting one it no doubt would be. It is the history of the old Semitic kingdoms of Babylon and Assyria. As yet we know it only conjecturally from its results. Whether the teachers were priests or laymen, they must have been highly respected. Assyria had a "god of learning."

The Older
Semites.

In both kingdoms were large libraries. The literature was written on clay tablets, afterwards burned. Some of these libraries were catalogued and open to the reading public. That of Erech was so large and famous that Erech was known as the "City of Books." Asshur-bani-pal's library at Nineveh, it is estimated, contained ten thousand books. Large portions of these old libraries have been recovered from the ruins and deciphered. One work is a treatise on astronomy dating back to 3800 B.C. There are lexicons and grammars in great number, and treatises on geography, plants, animals, and arithmetic. There are also many religious writings, poems, myths, fables, and proverbs.

Besides the literature, there have been found many reports of officers, treaties, contracts, deeds, wills, and mortgages, all bearing testimony to the fact that the schoolmaster was abroad in the land.

More directly interesting than these older Semitic peoples are the Hebrews. The development of Hebrew nationality and the maintenance of Hebrew racial characteristics and eminence are the miracles of history. The nation was cradled in Egypt and received its tutelage in Egyptian bondage, yet one of the most notable facts of history is the marked contrast between Hebrew and Egyptian religion and social organization. The race has passed through many pathetic and apparently overwhelming vicissitudes, enjoying comparatively brief periods of independent national life; and yet it seems to be as distinct and vigorous as ever, and furnishes powerful leaders of modern thought and action. The Hebrew religion was the one definitely monotheistic and strictly ethical religion of antiquity, and through Christianity it has given inspiration and character to nearly all that is noblest and purest in the highest types of modern civilization.

The history of the people between the exodus from Egypt and the destruction of Jerusalem by Titus and the consequent dispersion of the race naturally divides itself into three main periods. The first extends to the coronation of Saul, 1095 B.C.; the second, to the beginning of the Babylonish captivity, 586 B.C.; and the third, to the time of the siege, 70 A.D. This division is very convenient in the study of Hebrew education, because its different phases coincide closely with these periods.

The great central fact in Hebrew life, history, and literature is the belief that God is the creator and ruler of the universe, and the loving preserver of his people.

The Hebrew learned in his religion to regard law as the expression of the will of God. This gave him two fundamental ideas which even a cultured Greek or Roman could scarcely, if at all, comprehend, the ideas of righteousness and sin. These ingrained into his life a sense of individual responsibility to a living God whose "judgments are sure and righteous altogether."

Distinctive
Features of the
Civilization.

The religion that taught the Hebrew so to exalt God, in the process exalted him, placing a value and dignity upon the individual such as no other Oriental people ever knew. "And God said," the old account of the creation reads, "Let us make man in our image, after our likeness." It also glorified the family, giving a new sanctity to fatherhood and motherhood; and the degradation that was the lot of woman in Persia, India, and China was not known in Israel.

With the Hebrew, too, patriotism and religion were inseparable. He was taught to recognize the hand of God in all the events of history. All the bright pages in the history of his people were appeals at once to his patriotic enthusiasm and to his religious zeal.

In the period succeeding the exodus the Israelites maintained a sort of tribal confederacy. The organization was free and rather loose. The "judges" ruled by consent of the people. In this time education of the body of the people was made the concern of the family. Fathers and mothers, fathers in particular, were made the teachers of the children by commandment.

Domestic
Education.

"Hear, O Israel: The Lord our God is one Lord:" was the preamble to the law. "And thou shalt love,"

the law ran, "the Lord thy God with all thine heart, and with all thy soul, and with all thy might. And these words, which I command thee this day, shall be in thine heart: and thou shalt teach them diligently unto thy children, and shalt talk of them when thou sittest in thine house, and when thou walkest by the way, and when thou liest down, and when thou risest up. And thou shalt write them upon the posts of thy house, and on thy gates." (Deut. vi. 4-9.) It is similarly stated in the eleventh chapter.

A study of both chapters shows that the love of God was to be based on a knowledge of the great events in Hebrew history. These were to be studied as revelations of His power and His love for the nation. The "these words" of the commandment were particularly the ceremonial and moral laws which were to govern the whole life of the Israelite.

How old the command was and how well it was early obeyed, is not known, nor is it known when writing became general. Lapses into idolatry give evidence of occasional neglect of the law, but the time never was when its observance somewhere did not preserve the nobler life of Israel. No matter what other educational agencies were afterwards introduced, the law requiring domestic instruction was still considered binding.

During this period, what may be termed the higher education was confined mainly to the priests. As long as they continued in charge of the national worship they were, generally speaking, carefully educated in history and the law. This included a knowledge of the civil law and administration. All was

The Priests.

included in religion. It is likely, too, that they were instructed somewhat in the rudiments of astronomy and mathematics because of the movable feasts.

There came a time when the highest intellectual and spiritual life of the people was represented by the prophets. The period may be regarded as commencing with Samuel and extending to the time of the Babylonish captivity. The prophets sometimes were priests, but generally laymen. These prophets created for the ancient Israelites the noblest of their literary monuments. They were preachers of righteousness, and endeavored to broaden and deepen the popular conceptions of God. Some of them, like Elijah, made heroic struggle against the encroachments of foreign idolatry and vices upon the national virtues and religion. No people ever had nobler teachers or braver reformers. They not only predicted the coming of a Messiah, but they also anticipated some of the profoundest and sweetest declarations of the last great prophet of Israel, Jesus of Nazareth.

The
Prophets.

During the Babylonish captivity there arose a new class of teachers for Israel. These were the scribes. Originally they were copyists of the Scriptures. Occasionally they were priests as well. Upon the return from captivity they were organized, by Ezra, as interpreters of the law. This was one of the results of the great religious revival wrought by the captivity. Gradually all authority in religious questions was vested in the scribes. They assumed charge of the traditional supplements of the

The Scribes
and the
Rabbins.

law, they became teachers of the masses, and had charge of the administration of the law. They also established high schools in Hebrew learning. The heads of these schools were known as rabbis. In them were studied, in addition to Hebrew religion and law, astronomy and mathematics, and, as early as 300 B.C., Greek literature and philosophy. After the destruction of the temple and the dispersion of Israel, the scribes, or rabbis, superseded the priests.

In connection with this new effort to instruct the people there grew up, soon after the return from Babylon, a new institution that spread over Palestine and exercised untold influence upon the masses of the people.

The Synagogue. It was the synagogue. The law finally read that there should be a synagogue wherever at least ten Jews lived. The synagogue was presided over by a body of elders and a ruler chosen from among the people. These formed the local sanhedrim. Though the synagogue was a place of worship, it performed some of the offices of a school.

The services of the synagogue were held on the Sabbath and feast days. For the benefit of the peasants there were services also on market days, Monday and Thursday. There were no clergy in charge. One of the elders or any other competent person might be selected to conduct the services. These consisted in the recital of a creed, prayer, reading of a certain portion of the law and a portion of the prophets, exposition of the Scripture by the leader, and the blessing.

In the course of time the Hebrews supplemented the synagogue service with a Bible school for adults and

children. This was held in the synagogue in the afternoon. The teachers seem generally to have been scribes. The Scriptures, especially the law, were studied and largely committed to memory. The understanding of the lessons was developed by a masterful system of question and answer. Questions were put and answered by both pupils and teachers. This explains much that is characteristic of the gospel records of Jesus.

The Bible
School and
Elementary
Education.

The synagogue Bible schools are supposed to have existed as early as 80 B.C. In close connection with them there came to be established elementary day schools. It is likely that these were common before the time of our Saviour. They became compulsory in 64 A.D. The law required one teacher when the number of pupils did not exceed twenty-five, two when the number exceeded forty. The pupils from five to ten studied the old Scriptures; from ten to fifteen, the *Mishna*. If pupils continued their studies beyond this, they applied themselves to the *Gemara*. The *Mishna* is the traditional oral law, and the *Gemara* is the body of comments upon the *Mishna*. They together constitute the *Talmud*. This vast literature was held in memory and so transmitted. The *Mishna* was not committed to writing until 550 A.D.

To a superficial view this system of education seems to offer little basis for enthusiastic praise. It was very narrow. It lacked so much that we now consider essential in education. As was the case with Oriental education generally, it consisted mainly in memorizing rules and doctrines for the con-

Comments.

duct of life. Much that is formal appears, and little that tends to waken and enrich the varied resources of the mind; but when its fundamental conceptions of God, man, righteousness, and duty are considered, and the moral dignity and earnestness it put into human life, it does not seem unreasonable to say that Hebrew education was the noblest of all antiquity.

HISTORICAL SUMMARY

Exodus	14th century B.C.
Saul anointed King	1095 B.C.
Babylonish Captivity	586 B.C.
Synagogue established	5th century B.C.
Bible School established	2d century B.C.
Elementary School made compulsory	64 A.D.
Siege of Jerusalem by Titus	70 A.D.

PART II
THE CLASSICAL NATIONS

VI

THE GREEKS

To the student of either general or pedagogical history there must be perennial interest in the story of the Greeks and the Romans. Western civilization began with them. They wrought out its first chapters, and great chapters they were.

Introduction.

Certain classes among them attained a range of freedom in thought and action far beyond that which prevailed in the East. They utilized it with characteristic vigor and energy, and achieved commensurate results.

Athens with her statues and temples made herself the ornament and envy of the world, and became the centre of the most brilliant intellectual culture of antiquity; and Rome, with commanding genius, conquered and controlled the greatest and longest-lived of the ancient so-called world empires. From both, the modern world has inherited priceless treasures.

The ancient Greeks were in many respects a favored people. Their soil was fertile, and the climate delightful. Their country was small, but its coastline was so broken and indented that no part of the interior was more than forty miles from the sea. The overflow population filled the islands of the eastern Mediterranean and colonized southern Italy and the west coast of Asia Minor. Naturally a seafaring people themselves and visited by the Phœnicians, they were brought

Greece.

into intimate contact with the productions and intellectual achievements of all the great peoples of their time.

Upon minds as acute and active as theirs this exerted remarkable influence. They received suggestions and inspiration from all sources. In a manner peculiarly their own they improved, increased, and elaborated what they received, until the products of their genius eclipsed everything else of the kind then in the world.

The Greeks produced the *Iliad*, and the *Iliad* has retained its majesty and power to charm through all the succeeding centuries. When men gazed upon the temple of Diana at Ephesus and the Parthenon at Athens, they beheld such harmony of proportion, such richness of design, and such grace of pillar and sculptured work as the architects of the Tigris and the Nile had never anticipated even in their dreams. The Laocoon and the masterpieces of Phidias and his contemporaries exhausted the possibilities of sculpture and left nothing to the future but imitation. The audiences that listened to the plays of Æschylus and Euripides heard dramas as wonderful for their grasp of the deeper problems of life as for the perfection of their form. Many a great orator since has drunk in as a pupil the masterly eloquence which swayed the Athenian multitudes long ago; and, though the world has learned much since then, no man has grappled with the questions of philosophy more powerfully than the master-minds of Greece.

The Greeks lacked the strong moral fibre of the Jews and the genius for organization that characterized the Romans; but in keenness and breadth of intellectual

activity and in wealth of emotional life they excelled both. However varied their achievements were, one type of genius is manifest in all,—a sense of proportion and harmony, the *æsthetic sense*. It blossomed forth in their works of art and ripened in their systems of philosophy. It is necessary to bear this in mind in order to understand their educational efforts and ideals.

Type of
Genius.

What has been said of the Greeks generally does not apply equally to all. They never developed a really national life. The history of Greece is mainly a history of separate states and groups of states. These exhibited the genius of the race in varying degrees. The extremes in this respect were represented by Sparta and Athens. To the former will apply almost nothing of what has been said; to the latter, nearly all.

SPARTA

Back of every educational system is a philosophy more or less clearly formulated. Sometimes this philosophy embodies the ideals of highly cultured and reflective minds. Sometimes it is merely a practical grasp of the immediate and most evident demands of environment. This latter was the case with the Spartans.

They were foreigners and conquerors in the land which they occupied. They had come from the north of Greece about the eleventh century B.C.

History.

They claimed the soil by right of conquest.

The original inhabitants were known as Perioeci, dwellers roundabout. They were the farmers, artisans, and

business people. They paid rent and taxes, were free, but had no political rights. There were also in the country many slaves, Helots, the acquisition of wars waged by the Spartans with their neighbors.

The Perioeci and the Helots, naturally hostile to the Spartans, far outnumbered them, at times, if the authorities may be believed, in the proportion of nine or ten to one. This fact is the key to the constitution of Lycurgus and the educational system developed to make it effective. By this constitution every Spartan man, woman, and child was subjected to the state organization in every phase of life, and the whole organization was directed with reference to its self-preservation. No more striking comment could be attached to this statement than the assertion made by reliable historians that at intervals Helots were systematically murdered to keep down their numbers.

When a child was born, a public council decided whether it should live or die. If in the judgment of the officials it was likely to grow up weak or deformed, it was deposited in a mountain glen and allowed to perish unless taken and cared for by one of the Helots or Perioeci. Healthy children were cared for by their parents until seven years of age. Then they were placed in public institutions, where all were trained and disciplined alike.

The beds in the public dormitories were made of hay and straw. No blankets were used. After the boys were fifteen years old, they were compelled to sleep on rushes which they plucked along the banks of the Eurotas. They were not permitted to cut them.

Early Spartan
Life and
Discipline.

Till the age of twelve they were permitted to wear a short woollen skirt-shaped undergarment. After that they wore a sort of plaid which they wrapped about the body, but were allowed no undergarments. They wore no shoes either summer or winter.

For every slight offence they were whipped. At certain periods whippings were inflicted merely as a test of endurance. At the festival of Diana-Orthia young men were whipped in front of the altar of the goddess until the blood streamed down their backs, sometimes until they dropped dead.

In order to accustom them to endure hunger in war they were fed but scantily. They were, however, permitted to steal provisions to increase their food supply. This was designed to train them to steal upon their enemies and to forage when engaged in a campaign. If detected in the theft, they were severely flogged in order to make the next attempt more cautious and skilful.

Upon entering the public institution at seven, the boys were organized into small bands as parts of larger companies. At the heads of these bands and Physical
Culture. companies were placed selected young men of twenty years and upward. These directed the boys in their gymnastic exercises. Over all was a state officer, known as the pædonomus, with assistant officials.

The training was given mainly in the gymnasia. The exercises were designed to prepare the boys to become warriors. They were trained in running, leaping, ball play, wrestling, boxing, riding, swimming, throwing the discus and the javelin, military evolutions, and hunting.

The exercise of the little boys was at first confined to running, leaping, and playing ball.

Dancing, also, was made a part of the training. The movements in the dances were those of battle. These dances were performed in time with music, sometimes with the boys clad in armor and arranged in companies.

Reading and writing were not taught in the public institutions. In fact, all the elements of a finer education were either discouraged or forbidden. All Mental Training. who wished to learn to read and write were obliged to find for themselves such teachers as they could and employ them at their own expense.

The boys were, however, required to commit to memory and sing, or rather chant, the deeds of the gods and heroes, war songs, and the laws of Lycurgus. They also committed to memory portions of Homer and chanted them.

Certain virtues were carefully inculcated, good manners insisted upon, and the habit of forming clear-cut and incisive judgments with respect to the merits of citizens was systematically cultivated. The boys were taught to respect the aged and the laws of the state, to repress all evidence of suffering, to be honest, and to control their appetites. Intemperance was considered disgraceful in the highest degree. After supper they were frequently asked to express opinions concerning the excellence or defects of citizens. The answers were required to be short and to the point, and good reasons for them were demanded. If the judgments were not good and the answers were not as terse and correct as possible, the delinquent had his thumb bitten by the

master. At times the boys were sent to the tables of the matured and experienced men to listen to their discussion of state affairs.

At the age of eighteen the boys left the public schools to receive their specific preparation for war in the care of experienced men. From twenty to thirty they were known distinctively as youths. During this time they lived in separate barracks. They were kept in constant physical and military training. Military Training. It was from among these youths that the captains for the bands of boys were chosen.

Even married men until an advanced age were obliged to eat at the public tables to keep them from luxurious and enervating living. They were allowed to eat at home only on rare and specified occasions.

In order that the Spartan women might be the mothers of warriors the girls were trained much like the boys, but in separate establishments. Female Training. They were exercised in hopping, dancing, running, wrestling, leaping, throwing the discus and the javelin, and in singing. They became very vigorous and healthy.

The expenses of the public training were paid out of the taxes gathered from the *Periœci*.

One result of this training was a nation of sturdy warriors characterized by a few stern and noble public and private virtues. For centuries Sparta was considered invincible in battle. The Results. Thermopylæ remains through the centuries as the grandest monument at once of the strength and the short-sightedness of its policy. It was foolish to throw away use-

lessly the lives of hundreds of the finest fighting men, and yet it was so heroic as to put a halo of glory around the Spartan name forever.

There is an heroic ring in all the stories that come down to us out of that old Spartan life. A boy on one of the authorized foraging expeditions stole a fox. When surrounded by captors, he concealed it under his cloak. The animal began to gnaw at his vitals, but he never betrayed its presence by change of color or a twitch of muscle until he dropped dead.

The Spartan mother sent her son into battle with the command to return with his shield or on it. When Pausanias, the hero of Plataea, was convicted of treason because of his efforts to sell out his country to the Persians, he sought refuge in a temple. The rights of sanctuary would not permit his countrymen to drag him forth, so they walled up the entrance to cut him off from escape and from food and drink and tore off the roof to expose him to the elements, and his mother is said to have laid the first stone in the doorway.

Aside from the memory of such things, however, Sparta has contributed nothing to the world's grander life. Athens and Rome still live as factors in its civilization, but Sparta is dead. Out of that stern, cold, cruel life little could come to enlighten and refine.

ATHENS

In very early times Athenian life resembled that of Sparta, but Sparta fossilized and Athens grew. The history of Athens is the record of a steady progress towards the establishment of a

Social
Development.

democracy, and democracies put a premium upon education. They increase individual responsibility and multiply individual opportunity.

The last king of Athens perished about the middle of the tenth century B.C. He was succeeded by an archon elected by the nobles. The constitution of Solon, 594 B.C., gave to all classes of Athenian citizens the right to vote in the assembly. Through the reforms of Clisthenes, 509 B.C., citizenship was conferred upon all free inhabitants, and the battle of Marathon, 490 B.C., gave the democracy a triumphant supremacy in affairs of state.

Two considerable portions of the population, however, received no direct benefit from these changes. They were the women and the slaves. Even the greatest of Athenian philosophers accepted slavery as a matter of course, and throughout the historic period women occupied a very inferior social position. Neither slaves nor women were educated.

The Greek introduced a new thought into pedagogy. He seems to have come to its discovery through the effect of music upon his impressionable temperament. The Persian also recognized the value of physical exercise as a means of developing the body, but the Greek seems to have been the first to recognize distinctly the fact that appropriate exercise develops the mind.

The Athenian in his educational ideals manifested the same æsthetic spirit which created the charming symmetry of his temples and the unsurpassed beauty of his statuary. He sought neither the cumbersome learning of the Chinese nor the ponderous strength of

Educational
Ideal.

the Spartan. His aim was to produce men vigorous, symmetrical, and graceful of body, and equally vigorous, symmetrical, and graceful of mind. Accordingly he sent his boys to two schools, the palæstra, or wrestling school, and the didaskaleion, or music school; to the former for training of the body, to the latter for training of the mind. These were the elementary schools.

It is not definitely known whether these schools were located close together or separated some distance, nor at which the first period of the day was spent. While attending them, the school-boy was in charge of an aged or crippled slave, known from his office as The Pedagogue. the pedagogue. The pedagogue was responsible for his conduct on the way to and from school and in the intervals between the exercises. About day-break they proceeded together to some appointed part of the city where all the boys of the same school assembled. At the proper time all marched to school in something like military order.

The palæstra was in charge of a master known as the pædotribe. He trained the boys to stand on their toes, perform arm movements, climb a rope, run, jump, throw the discus and javelin, and to wrestle. The Palæstra. The discus was a heavy disk of stone or metal, and the object was to throw it as far as possible. To the other exercises was added dancing, both for the grace it developed and for the important part it played in the religious festivals.

The Athenians also laid great stress upon the ability to swim, but it cannot now be said with certainty whether they had systematic training in the art or not.

The palæstræ were under the patronage of the god Hermes. There was a statue of Hermes and an altar dedicated to him in each one. Here the boys offered prayers to the god before the gymnastic exercises of the day began.

Our knowledge concerning many things in Greek education is very unsatisfactory. Among the uncertain things is the ownership of buildings. As far as known the city of Athens never erected school-buildings for intellectual training, though it seems probable that it owned the grounds and buildings of the wrestling schools. It appointed and supported teachers for neither palæstra nor didaskaleion, but yet all teachers were in some measure under the supervision of the council of the Areopagus, which had the care of the morals of the city. Teachers were supported by the tuition fees which the parents paid. Children of poorer parents were sometimes taught in the open air or in public porticos.

The didaskaleia were under the guardianship of Apollo and the Muses. To them the boys paid their devotions on entering school, after respectfully saluting the teacher. The furniture of the rooms was very scanty. The boys either squatted on the floor or sat on low benches. The teacher had a higher seat. The discipline was severe. The incentives were the fear of punishment and the hope of reward. The school day was long. The pedagogue did not lead his young charge home till nearly or quite sunset. The routine of school work, however, was frequently and pleasantly interrupted by holidays for religious festivals. In the palæstra there were special

festivals in honor of Hermes ; and in the music schools, in honor of Apollo and the Muses. On such occasions there were competitive exercises and sacrifices. Before the sacrifices the winning competitors were crowned with wreaths. It was a great day for a boy when he could go home from school with a victor's wreath on his head.

All elementary literary instruction in the Athenian schools seems to have had its beginning in efforts to teach boys to sing religious and patriotic hymns and to chant the great epics of their country. Musical training, rendered important by a sense of its exalted utility, continued to hold a high place in Athenian esteem, and was supported in it by philosophic theory. "Music," Aristotle said, representing the profoundest Greek thought on the subject, "brings harmony, first into the human being himself by putting an end to the conflict between his passions and his intelligent will, and then, as a consequence, into his relations with his fellows."

The boys sang hymns every day, and, about their thirteenth year, they were taught to play accompaniments on the cithara.

As early, no doubt, as Solon, reading, writing, and arithmetic were taught in the didaskaleion. The reading lessons were taken mainly from Homer and Hesiod. The *Iliad* and the *Odyssey* were at once the Greek boy's Bible and text-books on history and geography.

The pupils were taught to read in the old way repeated through the centuries. They first learned to

know the letters and their names, and then spelled easy syllables and words. When sufficiently skilled in this, the teacher dictated to them portions of poems, which they wrote on tablets. The written exercises of one day became the reading lessons of the next. There was one difficulty in the reading lesson which does not trouble the modern school-boy, though he has troubles enough that are peculiarly his own. In Greek writing there was no spacing between words and clauses. Before the reading exercise began, the teacher generally separated the words for the pupils with punctuation marks. The first time the lessons were read over for readiness of utterance, and afterwards for elocutionary effect.

The first writing lessons were done in sand placed in a box or scattered on the ground. The pupils imitated models set by the teacher. Later they wrote on wax tablets with a stylus.

The lessons in arithmetic were very elementary. Only the simple operations of practical life were taught. Operations were performed with pebbles or
an abacus. These devices were necessary Arithmetic. because, like most other ancient nations, the Greeks lacked a convenient system of notation. To indicate numbers they used the letters of their alphabet modified with marks and supplemented with several others selected from a foreign alphabet. Operations with these were exceedingly complicated and difficult. The following is a comparatively easy problem taken for illustration from Gow's valuable history of Greek mathematics. The work in Arabic notation indicates the nature of the process.

$\sigma \xi \epsilon$				265
$\overline{\sigma \xi \epsilon}$				265
δ	α			40000 , 12000 , 1000
M	M	β	α	12000 , 3600 , 300
α				1000 , 300 , 25
M	β	$\gamma \chi$	τ	70225
	α	τ	$\chi \epsilon$	
ζ				
M	$\overline{\sigma \chi \epsilon}$			

The Greek abacus had strings for the different denominations. A ball or pebble on one string indicated one; on another, ten; on another, a hundred; and so on.

About the middle of the fourth century drawing, geometry, geography, and, a little later, grammar were added to the course of study. It is probable that there then gradually resulted a separation of the advanced studies from the others and the establishment of secondary schools.

When boys were about fifteen, they were freed from the oversight of the pedagogue and ceased to attend the elementary schools. They then entered the gymnasium to receive their final physical training to fit them for the duties of citizenship.

The gymnasia were state institutions. Solon had two erected, the Academy, immortalized by the teaching of Plato, to the northwest of the city, and the Cynosarges to the east. In the time of Pericles was added a third, the Lyceum, to be made as deathless in fame as the Academy by the intellectual triumphs of Aristotle. Around the gymnasia were public parks and pleasure grounds. The Lyceum especially

was noted for the shady wood and beautiful gardens in the midst of which it was located.

The exercises of the gymnasia were in charge of state officers. They were collectively called the pentathlon, and consisted of running, leaping, discus-
 throwing, wrestling, and boxing. They were Gymnastic
Training.
 much more severe than the similar exercises in the palæstræ.

Before wrestling, the body of the gymnast was rubbed over with oil and strewed with sand. After the bout, the body was scraped with a strigil, and, after a bath in cold water, it was again anointed with oil. Then came a rest with the naked body exposed to the sun; so the skin became brown as a chestnut. This training produced the models for those sculptured gods that have ever since delighted the world.

At eighteen the boys graduated and became *ephebi*,—youths. They were now enrolled on the register of the deme, or ward, to which they belonged, and
 were introduced to the citizens by the archon The Ephebi.
 at a public meeting. On this occasion they were armed with spear and shield at the public expense. They then swore in the temple of Aglauros never to disgrace their arms nor desert a companion in the ranks, to transmit the fatherland greater than they had received it, to observe the laws, and to honor the religion of their fathers.

The ephebic period lasted two years. Much of this time was spent outside of the city in garrisons or in policing the country districts. Gradually much looseness seems to have crept into the maintenance of ephebic service.

The early history of Grecian higher education does not belong strictly to Athens, but the higher educational efforts of the Athenians followed the earlier attempts in a natural succession.

From the seventh to the fifth centuries B.C. there arose in different parts of the Greek world philosophers who gathered disciples about them. They speculated mainly on the nature and origin of things in the natural world. They attributed the origin of things to water, fire, or air regarded as animate primal substance, or to animate material Infinity. The solutions they found for the problems of the universe were crude enough, but their efforts were the beginning of that scientific and philosophic activity which contributed so much to the glory of Greece and enabled her to exert powerful influence after her glory had vanished. Some of these philosophers were masters of the mathematics and astronomy of their day, and contributed materially to the development of these sciences. Thales, the first of them, introduced geometry into Greece.

The most interesting of these early philosophical schools was the Pythagorean.

Pythagoras was born on the island of Samos about 580 B.C. He founded a school in Crotona, southern Italy. His school was a moral society on a religious basis. Though Pythagoras was in all probability an Ionic Greek, the spirit of the organization was Doric. The members formed a brotherhood. They were disciplined to implicit obedience, physical hardihood, and fidelity to friends. They were fed from a common fund, and the fare was simple.

The Early
Philosophers.

The School of
Pythagoras.

Pythagoras was a man of magnificent physique and added to the impressiveness of his presence by remarkable gravity of manner, by letting his hair and beard grow long, and by wearing a white robe and a crown of gold.

The younger students served a sort of novitiate for several years. In this period the philosopher taught them from behind a curtain. Certain parts of his doctrine were withheld from them as mysteries. These were taught to advanced students only, with whom intercourse was much freer. One of these mysteries was that the earth is a sphere revolving around a central fire.

Pythagoras and his followers taught that number is the origin, or essence, of things, and that the laws of numbers are the laws of things. He accordingly laid great stress on mathematics. He discovered that the square of the hypotenuse of a right-angled triangle is equal to the sum of the squares of the other two sides. He gave scientific form to geometry.

Pythagorean
Doctrine.

The aim of his instruction and discipline was to produce harmony in human life corresponding to that which he found in the natural world,—harmony between soul and body, and harmony in society by finding each man's place in the social order and fitting him for it. The basis of all harmony and moral action he found in religion, and religious exercises were frequent in the school. One of the potent means of producing harmony in life he sought in music. He worked out and taught the mathematical relations of musical notes, and so founded the science of music.

One of the peculiar theories attributed to him was the

doctrine of the transmigration of souls. Coupled with it was the idea of a future life and retribution, and it thus became a source of ethical power.

The aristocratic tendency of the school invoked popular hatred, and it was suppressed by mob violence. The suppression scattered Pythagoreans over the Greek countries, and noble evidences of their influence can be traced through a number of centuries.

For a time philosophical inquiry was obscured by the activity and popularity of a class of teachers known as Sophists. They wandered from place to place, but finally their work centred in Athens. From the middle of the fifth century B.C. they monopolized higher education nearly a hundred years.

The reason for their popularity is not far to seek. The battle of Marathon affected a great change in Athenian life. In the older order of things the man was almost entirely lost in the state. Without question he accepted and respected its social ideas and religion as the sacred heritage of the past, and he devoted his life to its service. Marathon gave Athens the leadership of a large part of Greece and established the democracy. This offered large opportunity for the exercise of personal ambition, and men learned to place their own interests before those of the state. The Sophists served this new spirit.

The most noted of these teachers were Protagoras, Gorgias, and Prodicus. Protagoras was the first to come to Athens. He taught grammar, style, poetry, and oratory. Some of those who came later taught mathematics.

End of the
School.

Popularity of
the Sophists.

Work of the
Sophists.

The Sophists early developed the science of rhetoric, and devoted pre-eminent attention to it and to disputation. They taught in rooms rented in the gymnasia and in the public squares of the city. Their pupils were taken principally from among the young men of the ephebic class.

As a class they were sceptical with respect to the old philosophical search after truth. The natural tendency of their work was to exalt victory in argument above truth and right. Some of them advertised their ability to train pupils to win even if maintaining the poorer side of a question in debate. Much of their teaching was mechanical and shallow. With it all went the cultivation of a disregard for the old religion and social discipline. These things brought upon them the attacks of thoughtful and conservative people, in spite of the fact that among them were earnest men and excellent teachers. The later philosophers attacked them bitterly, also, because they exacted pay for their services.

The individualism growing out of the changed condition of affairs in Athens and fostered by the Sophists threatened the state with weakness and disintegration. Therefore profound thinkers and sincere patriots sought to give society a new unity and power. This effort gave rise to the first great schools of philosophy. Eventually there were four, the Academic, the Peripatetic, the Stoic, and the Epicurean. On the threshold of these philosophic movements stands Socrates, one of the noblest and most striking figures in the history of his country.

The Great
Philosophical
Schools.

In the palmiest days of Athens, when the Parthenon

crowned the Acropolis and the Agora was resplendent with the gleam of marble pillar and statue, Socrates was one of the most prominent features of the city's life. Wherever he tarried in public a group of his nimble-witted countrymen was sure to gather about him; for he had a wonderful way of asking questions, and a wonderful way of weaving into his questions illustrations drawn from the common employments of men.

In appearance he was strangely out of harmony with the beauty of his environment. He was careless in dress. His body was massive. His eyes projected. His nose was depressed, and the nostrils were dilated and upturned. He shambled in his gait. The comic poets aimed many shafts of wit at him. Yet in the man's spirit there was something that made him grander than anything else in Athens. He was one of that select number of men in the world's history destined to die because of the good they have sought to do.

He was born near Athens, 469 B.C. He several times, before he became a public teacher, had engaged in military service and distinguished himself by his courage and indifference to hardship. He showed the heroism of his temper, once as an official and once as a private citizen, by refusing to violate the law of the state at the bidding of the tyrants who governed it. His father was a sculptor and educated the son to the occupation, but he dropped the fashioning of marble for the higher employment of fashioning the minds of men.

In his teaching Socrates avoided, as much as possible, direct statements of truth. His method was to elicit

statements from others by means of questions. These questions were of two kinds, both designed to awaken thought and lead to clear and definite propositions, one to convince of error, the other to develop a fundamental truth. Questions of the first kind have been called ironical; those of the second Socrates himself termed *maieutic*,—birth-giving.

The Socratic
Method.

If he learned that a young man entertained an opinion which seemed to him erroneous, he sought opportunity to engage him in conversation. When the opportunity came, he asked a series of questions which either embodied propositions challenging assent or suggested a line of thought which made necessary a proposition which Socrates desired. So, step by step, the man was led on until suddenly and unexpectedly brought face to face with the logical consequences of his opinion. He was thus either convinced of his error or rendered unable to maintain it with argument. This was ironical questioning. In a similar manner questions were put to men whose opinions or purposes in life were not yet clearly formed, but with the opposite result. Ever since he employed the method such questioning has been called Socratic.

Socrates had little more respect for the theories of the early philosophers than the Sophists themselves, and he was not in sympathy with the conservatives who opposed them. They were looking back to the old order of things, he was looking forward to a new. He made a sincere but inadequate effort to reform society. His aim was moral, and that accounts for his method. He adopted as fundamental the proposition

Purpose of
Socrates.

that "Man is the measure of all things." He meant by it that in every man's life lies the truth whose practice accomplishes the welfare of both the individual and society. In other words, he believed that the individual represents the common, or universal, life of mankind. His motto, therefore, was "Know thyself."

Men, as he thought, think lazily or hastily, and, therefore, form *opinions*, which are individual, but fail to discover *truth*, which is universal. As a consequence, they conduct their lives poorly, are driven asunder by personal ambitions, and thus weaken and destroy society. He devised his method of questioning to waken men to active and careful thought, so that they might discover truth and live virtuous lives. He failed to see that men may know and yet not do.

Socrates himself formulated no system of philosophy, but certain more or less clearly defined philosophical conceptions directed all his activity, and he inspired

Plato, the first of the great philosophers, who was for many years his disciple. He turned the attention of thoughtful men from the physical theories of the old philosophers to the study of man himself. He looked upon the purpose manifest in the fitness of parts of the creation to one another as evidence of the divine origin of things. He believed in the immortality of the soul, and spent the last moments of his life in discoursing about the activity and happiness he anticipated in the future life. He first put into Greek thought the idea of the individual faithful to the purity, union, and advancement of society in the free exercise of the attributes of his manhood.

Relation of
Socrates to
Philosophy.

The advocates of the old order of things and men instigated by personal resentment engendered by his teaching and his attacks upon the Sophists finally had him condemned to death. Men never think of that old man calmly drinking the poisoned chalice without a deep feeling of admiration and reverence.

After Socrates came Plato. He was born of a noble Athenian family, 429 B.C. He taught in the park of the gymnasium known as the Academy. From Plato and
his Theory. this his school took its name. He originated the theory of Ideas. Universal truths he called ideas. He considered them self-existent substances, or essences. The highest of them was the "Good." He thought of them as occupying an independent world beyond the limits of the world of sense, and regarded them as the causes and patterns of sensuous existences, through which they imperfectly reveal themselves.

The souls of men, in his view, are not only immortal, but also existed in a high state previous to this life. The memory of that higher state still lingers in the souls of a few men, and is awakened by the beautiful things of earth to an intense desire, a madness he called it, to attain to a knowledge of the truth. These are the wise men. Dialectic, or philosophy, is the means by which they pass from the contemplation and enjoyment of earthly beauties to the contemplation of the beauty of "ideas." Last of all, they pass to the contemplation and enjoyment of the "good." These are the men who should direct the affairs of human society.

In the formulation of his theory of the state Plato treated it as one living being. He analyzed man's soul

into three faculties,—(1) intellect, or reason; (2) spirit, or courage; (3) desire, or appetite. In the state, he regarded merchants and producers as representing its appetite; the soldiers, its spirit; and the philosophers, its intellect. The harmony of the state was to be preserved by having these classes live separate and attend to their respective functions, all under control of the philosophers.

Theory of
State and
Education.

In this rather remarkable state everything was to be subordinated to *it*. Family life, in the ordinary sense, and private property were to be abolished. Marriage was to be regulated by the state; healthy children were to be its property, and delicate children put to death.

In harmony with his psychologic theory and plan of society Plato wrote the first scientific treatise on education ever produced in Europe. He advocated gymnastic training and the study of arithmetic, geometry, astronomy, harmonics, and philosophy.

This crude and unnatural plan of state organization was, at the time, entirely impracticable. In the Middle

Ages the state of society which prevailed for several hundred years resembled its general features strikingly.

Criticism.

The theory of "ideas" is very beautiful because of its exalted view of truth. It has always, since his day, deeply influenced a certain type of high-souled and thoughtful men. Mingled with thoughts taken from other Greek philosophers and with Oriental elements, it took a strong hold upon the intellectual life of Alexandria. In this modified form it is known as Neo-Pla-

tonism. This made the last struggle of pagan philosophy against Christianity.

The Peripatetic school of philosophy came into existence next after the Academy. It was founded by Aristotle. He was born of Greek parents in Stagira, Macedonia, 384 B.C. He studied The Founder of the Peripatetic School. under Plato nearly twenty years. At the age of forty he became the tutor of Alexander the Great. He held this office three years. He afterwards returned to Athens and taught in the Lyceum. From the fact that he walked back and forth under the trees or in the porticos while teaching, his school received its name, for peripatetic means walking about.

Aristotle was the greatest of all the Greek philosophers, a man of genuinely scientific mind. He was one of the greatest intellects the world has ever known. Dante called him "the master of those that know." He was the first great systematic inductive thinker. To find a basis, for instance, for his theory of an ideal state, he wrote out the constitutional histories of more than two hundred and fifty states. From these he selected data for his generalizations and recommendations.

He wrote treatises on nearly all departments of learning cultivated in his time. Among them were works on rhetoric, logic, poetry, morals, politics, physics, and metaphysics. He wrote the first His Intellectual Activity. systematic treatise on psychology. He approached the subject from the physiological stand-point. His general physical theories now mainly sound like fanciful guesses, but he wrote a scientific zoology. He

originated the science of deductive logic. Some of his works are still studied as text-books.

Aristotle rejected Plato's theory of "ideas." He thought that men must find truth by harmonizing the revelation of divine intelligence in human life with the revelation of it in nature. Above all other existences is the Prime Mover, the Supreme Mind, to the contemplation of whom man may rise.

He also did not accept Plato's ideas of state organization. He believed the purpose of instruction to be the development of the imperfect, untrained child into the well-trained and patriotic citizen. The curriculum for the accomplishment of the purpose was to include gymnastics, music, drawing, grammar, rhetoric, philosophy, and politics.

Just after Aristotle's death his school was small, but in the latter half of the Middle Ages he reigned supreme in the intellectual activity of Western Europe.

Soon after the death of Aristotle the third school was established. Its founder was a foreigner, Zeno, who brought with him to Athens Oriental characteristics of mind. He was born on the island of Cyprus, of Phœnician parents, 340 B.C. He studied in Greece many years. He taught in a portico on the north side of the Athenian market-place. It was called the *Στοά ποικίλη*,—painted porch. For this reason the school was named Stoic.

The belief of the Stoics was a kind of materialistic pantheism. God they considered corporeal. The original fiery ether was the substance of God. Out of it all things were produced, and it pervades all things. It is

the living soul of the world. The souls of men are also corporeal. Men and the gods are the highest manifestation of the world soul. After death a man's soul returns to its source and becomes incorporated with it. The theory carried with it the idea of unity and law. It was an appeal to broad sympathy. It was the basis of the Stoic precept,—“Live according to nature.”

The Stoics taught three branches of philosophy,—physics, logic, and ethics. They studied physics, nature, to find a guide to living; logic, to master methods and tests of knowledge; and ethics, as the highest of all sciences, in order to lead noble lives.

One of the features of their ethical system was the effort to train men to be superior to pain and pleasure. To allow one's self to seek pleasure or to display emotion because of misfortune was considered unmanly.

Stoic philosophy had the value of a high type of religion. It was the greatest school of morals the pagan world ever produced. It maintained itself six centuries. It was peculiarly adapted to the Roman temper and was specially influential among the Romans. Seneca, Epicureanism, and Marcus Aurelius were the best of its later representatives.

Side by side with Stoicism existed Epicureanism. The school was named after its founder, Epicurus. He lived contemporary with Zeno. Like Plato, he bequeathed his property, or at least part of it, to his school.

The Epicureans believed the universe to be made up

of numberless and varied living atoms. They thought the soul to be diffused over the whole body, and to consist of "atoms of the most perfect lightness and roundness."

They were the opposites of the Stoics. They regarded pleasure the highest good. They esteemed that man wisest who escaped most pain and attained the fullest measure of pleasure. Virtue was valued by them as a means to pleasure.

Later Epicureanism became very corrupt. It fostered indulgence of sensuous appetites and passions. Its founder was a high-minded man, but his school after him produced no great character.

The intense and brilliant intellectual activity of Athens made her the centre of Greek culture. It almost kept her glory undimmed even when she had lost her autonomy. The conquests of Alexander carried the Greek language into many lands, and the Greek teacher and Greek learning went with it. When Greece was absorbed into the Roman empire the Greeks became the teachers of Rome. The philosophic schools of Athens were self-perpetuating organizations, and they made Athens the great university city of the empire. Many powerful rivals arose, but she maintained her supremacy long, and was finally eclipsed by Alexandria alone.

Later her schools were closed. The ravages of time shattered the statues of the Acropolis and disrupted the walls of the Parthenon. But in another age enthusiasm for things true and beautiful brought Greece to life again, and the charm of her genius is still potent.

HISTORICAL SUMMARY

Spartan Migration	11th century B.C.
Constitution of Lycurgus	9th century B.C.
Death of Codrus, last king of Athens	10th century B.C.
Constitution of Solon	594 B.C.
Constitution of Clisthenes	490 B.C.
Early Greek Philosophers	7th-5th century B.C.
Pythagoras	580 B.C.
Sophists	500-300 B.C.
Socrates	469 B.C.
Plato	429 B.C.
Aristotle	384 B.C.
Zeno	340 B.C.
Epicurus	341 B.C.

VII

ROME

THE Romans were very unlike the Athenians. They were proud and coarse-grained to the point of brutality. They developed neither literature nor art nor philosophy until they learned from the Greeks. There was, however, a rugged manliness and intensity in their character which the Greeks had not. They were conquering warriors, organizers, and law-makers, men of practical genius.

Rome performed great services for humanity. She did for many diverse and, frequently, hostile peoples what the Greek states could not do for themselves. She welded them together into national units, and then disciplined them into the broader life of the colossal empire into which she had incorporated them. She gave to Greek and Jew a wider scope of activity and influence than could otherwise have been theirs, and finally to the apostles of the meek and lowly Nazarene an unrivalled field for missionary enterprise.

One source of the tremendous power of Rome and the richest ornament of its history was the home life that prevailed until wealth and luxury began to corrupt everything that was Roman. Fire was kept always burning on the altar of Vesta, the goddess of the hearth, and every household had its lares and penates. There was a freedom and dignity vested

National
Character.

Early Home
Life.

in Roman motherhood unique in the pagan world, and home influences were correspondingly powerful and ennobling. The charming type of the Roman mother is represented by Cornelia placing her hands on the heads of her boys with the proud assertion "These are my jewels."

In appreciation of the dignity of the mother's office, it seems to have been quite common to give the girls at least elementary schooling. Possibly the first mention of schools in Roman history occurs in the story of Virginia. She was murdered 305 B.C., and the narrative states that the crime was committed while she was on her way to school. In later times girls sometimes attended secondary schools or even took a higher course.

Rome began as a military settlement on the Tiber. It early became a republic. Its growth was phenomenal, and yet the teacher came to it but slowly. The reason no doubt, lies in its almost unbroken series of wars, demanding ceaseless activity and such gifts of courage for battle and good sense for the administration of affairs among crude peoples as are better learned in practice than in the school-room. To this must be added also the lack of literature. Aside from legends, hymns, and popular poems, there does not seem to have been any Latin literature to teach until about 233 B.C. At that time Livius Andronicus translated the *Odyssey* into Latin. This became the standard reading book of the elementary schools.

It is claimed that there were schools as early as the end of the fourth century B.C., but the first definitely recorded school was opened 260 B.C. by Spurius Carvilius, a freedman.

Early
Education.

The greatest impetus to educational activity came through the conquest of Greece. By the victory at Pydna, 168 B.C., and the destruction of Corinth, 147 B.C., the Romans completed their mastery of that country, and Rome was soon filled with Greek teachers. By that time, too, the country was well organized; and its business interests, with the range of opportunity they offered to young men, created a great demand for education. The empire, beginning with Augustus Cæsar, largely increased this.

By the middle of the second century school work was fairly well organized and two grades established, to be soon followed by a third. The schools at first were not supported by the state, nor were they under state supervision.

The teacher of an elementary school was called *magister ludi* or *literator*. The course included reading, writing, and arithmetic. After the alphabet and spelling came the reading of the *Latin Odyssey*. Writing exercises were done, as with the Greeks, on wax tablets with a stylus. The pupils were sometimes prepared for them by tracing letters inscribed on tablets or engraved in wood. Arithmetical calculations were made with the fingers, pebbles, or an abacus, and the results recorded on tablets. The Roman schools were thoroughly utilitarian in spirit and found no use for music.

The pupils were required to commit to memory the *Laws of the Twelve Tables*. Maxims and precepts were dictated to them as composition exercises and likewise committed to memory.

When twelve years of age, the pupils left the elementary school and commenced the secondary course. The teacher of a secondary school was called a grammaticus or literatus. The literator had Secondary Education. low social standing, but the literatus ranked high, and sometimes acquired a fortune through wealthy patrons.

There were two kinds of secondary schools, Greek and Latin. Pupils generally took the course in Greek first and then the Latin.

The studies were grammar, Æsop, Homer, composition, musical rhythm, declamation, rhetoric, literary criticism, and, sometimes, geography. When the native literature developed, Vergil and Cicero were studied in the Latin course.

Pupils of this grade occasionally studied geometry for the sake of mensuration. This seems to have been done under special teachers.

Portions of the literature were committed to memory. Much stress was laid on composition. Dictation exercises were frequent. Fables and short stories were reproduced. Poems were paraphrased. Sentences were transformed by change of number, case, tense, and arrangement of parts. They were also explained and expanded. The pupils were likewise drilled in versification.

At fifteen or sixteen the boy laid aside the toga prætexta of his boyhood and assumed the toga virilis, the distinctive dress of the Roman citizen. Then he prepared for his life occupation. There were four fields of activity open to his ambition, the farm, the army, politics, and law.

To learn farming he placed himself under the training of a practical manager of a farm. If he wished to prepare himself for military office, he attached
 Professional Training. himself to the staff of some commander. To prepare for political activity or the forum, he connected himself under instruction with some orator and jurist. The training was thus very practical.

Political and law students frequently supplemented their private training with a course of study in a school
 Higher Schools. of rhetoric or oratory. In these schools the students wrote and delivered orations and tried fictitious cases. They studied rhetoric, literature, criticism, and law. As a means to more perfect equipment they also applied themselves to mathematics and philosophy. These studies were generally pursued under special teachers. In the latter days of the republic considerable attention was devoted to Roman history.

In later times, young men who, like Cicero and Cæsar, developed scholarly ambition, resorted to Athens and Rhodes to complete their education, particularly in philosophy and oratory. Besides the great schools of Athens and Rhodes, there were university schools in Appollonia, Mitylene, Tarsus, Pergamus, Massilia (Marseilles), and Alexandria.

A number of Roman writers set forth more or less complete theories of education. Among these were
 Educational Theorists. Cicero and Seneca, but the most comprehensive expression of theory has come down to us in the *Institutes of Oratory* by Quintilian.

Quintilian was born in Calagurris, Spain, 38 A.D. He studied at Rome, and, after a short absence, he returned

to practise law there. Later he opened a school in oratory. As a training for this, he gave a broad grammatical and literary culture. He wrote the *Institutes* to present his views on the education of the orator.

Besides being a treatise on oratory, the *Institutes* review the whole field of educational theory. Quintilian's views are sensible and practical. Because of the decay that had already begun in family life, he preferred the school to private instruction, which was quite common in Rome. He advised that the shapes of the letters should be impressed on the minds of the children with the names. He recommended that choice passages of prose and poetry be memorized to increase the power of memory. He thought that work should be graded to the ability of the pupil, and that discipline should be mild.

With Quintilian began a new era in Roman education. Domitian gave him permission to wear the insignia of consular rank. Vespasian, 70–79 A.D., fixed upon him and a few other rhetoricians a salary out of the public treasury. The same emperor began the University of Rome by erecting a fine building, the Athenæum, for teachers of grammar and rhetoric.

Changes of this character came rapidly. Antoninus Pius, 138–161 A.D., granted to a certain number of teachers of grammar, rhetoric, and philosophy in the towns and cities throughout the empire exemption from taxes, from holding municipal offices, from quartering soldiers, and from military service.

Marcus Aurelius fixed a liberal salary on two teachers of each of the four philosophical schools in Athens and

on two teachers of oratory. Municipalities also established schools and paid salaries, and in 376 A.D. Gratian ordered state salaries to be paid to the grammarians and rhetoricians in the Gallic capitals equal to their municipal salaries.

By this time the courses of learning had become well fixed. A liberal education was regarded as covering grammar, rhetoric, dialectic, music, arithmetic, geometry, and astronomy. About the end of the fourth century the first three became known as the trivium, and the remaining four as the quadrivium.

Throughout the history of the empire the University of Alexandria continued to be the most perfectly organized scientific school within its borders. It owed its existence to Ptolemy I. He founded the great library of Alexandria in the third century B.C., and established in connection with it a school which he called the Museum. He erected for it a stately building in a noble neighborhood. Near it were the Serapeum, the royal palace, the amphitheatre, and the gymnasia. A broad portico extended along its front. Opening upon it were doors leading into the lecture-halls. A number of professors were lodged in the building.

Ptolemy liberally endowed the professorships, and invited the most eminent men of his time to fill the chairs. His successors continued his policy. They erected additions to the building and increased the teaching force.

In the University were professors of grammar, rhetoric, poetry, philosophy, astronomy, music, mathematics,

Founding of
University of
Alexandria.

Its Work.

and medicine. It was pre-eminent in medicine, mathematics, geography, astronomy, and grammar.

Three of the four greatest mathematicians of the Greek world taught in the Museum. Euclid is said to have founded its course in mathematics. It was here that he wrought out his geometry,—until quite recently the text-book on the subject throughout Europe and still used. The earliest algebraic treatise now known was the work of another scholar of the Museum, Diophantus, who lived in the fourth century A.D. It treats of the solution of equations. Another, Eratosthenes, in the third century B.C., placed geography on a mathematical and astronomical basis. He was the first to calculate the magnitude of the earth by measuring an arc of the meridian. Two of its professors in later years studied the valves of the heart and their functions, and the sensor and motor nerves.

From the beginning Greek philosophical ideas were in the Museum mingled with Oriental religious conceptions. Out of the combination grew the Neo-Platonic movement in the third century A.D. It ^{Neo-Platonism.} came to its end in the fifth with the tragic death of its last gifted advocate, the beautiful and cultured Hypatia. The Museum itself was destroyed by fire in the seventh century.

One of the interesting employments of the historian of to-day is to trace the influence of the Greeks and the Romans upon the civilization of the modern world. In this influence they are complementary, for they were strangely contrasted in mental characteristics. Long ago, in his *De Arte Poetica*, Horace pointed out the contrast.

Concluding
Remarks.

The ideal of the Greek was æsthetic. He sought grace and symmetry, harmony and proportion. His æsthetic genius was as manifest in his physical training as in his intellectual pursuits. It finally became mature in philosophy, for philosophy is the soul's effort to discover the inner unity and harmony of the universe. So the Greek became a man of reflection, a cultured man of thought.

The ideal of the Roman, on the other hand, before he yielded to Greek influence, was practical. "The Roman boys," Horace said, "learn by long processes to divide an *as* into a hundred parts." Their elders sought to make them skilful and effective men of action. They became the great lawmakers of antiquity, the rulers and civilizers of the world.

It is evident that the history of Roman education is largely a continuation of that of the Greeks. Almost without exception the universities were located in Greek cities and were founded prior to the Roman occupation. Secondary education originated with Greek teachers, and even the elementary schools owed something to Greek literature. Yet it would be a great mistake to ascribe the educational activity of Rome entirely to Greek genius. The Roman mind was too virile and too pervasive throughout the empire to permit such to be the case. Every phase of education was modified by it and revealed something of its practical temper, and finally the same genius that organized the vast conquests of the imperial city on the Tiber applied itself to the organization of its school work. Before the empire entered upon its period of decay it had the most extensive and thoroughly organized system of education that had yet existed. The

same causes that corrupted the empire and led to its destruction ate the life out of the schools. They languished and died, and the German barbarians swept away most of the remains.

HISTORICAL SUMMARY

City founded	753 B.C.
Republic established	509 B.C.
The Twelve Tables of the Law adopted	449 B.C.
First definite mention of schools	305 B.C.
First recorded school	260 B.C.
Odyssey translated	233 B.C.
Corinth destroyed	147 B.C.
Cicero born	106 B.C.
Vergil born	70 B.C.
Empire established	31 B.C.
Quintilian salaried by the Emperor Vespasian	70-79 A.D.

PART III

EARLY AND MEDIÆVAL CHRISTIAN EDUCATION

VIII

THE FOUNDER OF CHRISTIANITY

WHILE Tiberius Cæsar was on the throne of the Roman Empire there went about in one of the most obscure and despised portions of it one who spoke of himself alternately as the "Son of God" and the "Son of man." It was Jesus of Nazareth. The life he led was extremely simple and lowly. He was absolutely devoid of what men term ambition. One of his characteristic utterances was, "I seek not mine own glory." To a man who asked to be accepted among his followers he said, "The foxes have holes, and the birds of the air have nests, but the Son of man hath not where to lay his head." As his special companions he chose twelve illiterate men, mostly fishermen from the sea of Galilee.

Jesus of
Nazareth.

Some trustingly received his message, but by the generality of men he was despised and rejected, and he was finally condemned to death by the chief priests and rulers of his people. With a tender pathos begotten of his reverence and love for the Master, one of his disciples afterwards said, "The light shineth in the darkness, and the darkness comprehended it not." "He came unto his own and his own received him not." Yet by his life and death he gave to human life a meaning men had never before discovered in it; to man as man, a value and dignity almost entirely unknown to Greek

philosophy and but faintly anticipated even by the great prophets of his own people.

Jesus did not, like the Greek philosophers, seek a new unity for a small state and overlook the claims of its lowly and oppressed. He sought the unity of the race.

His Mission. He endeavored to establish it on the most exalted possible development of the individual.

One of the striking commands to his disciples was, "Be ye therefore perfect, even as your Father which is in heaven is perfect." No words could envelop individuality with greater glory than the declaration of the disciple John, "As many as received him, to them gave he power to become the sons of God," or his own statement, "The kingdom of God is within you." In a word, he sought to unify the race by so ennobling its individual members that they might recognize the will of God as by instinct and do it with the enthusiasm of a love for one another like his own. "This is my commandment," he said on the eve of his death, "that ye love one another as I have loved you."

He met men and dealt with them entirely on the basis of their humanity. In his treatment of them he recognized no distinction as due to nationality, creed, caste, wealth, or learning. He taught the Samaritan woman with the same dignified thoughtfulness that he manifested

Relation to Men. to his immediate disciples, and he spoke to the sinful woman who came to him at the

Pharisee's house with the same tender respect that he accorded those whose lives were beyond reproach. Possibly the commonest taunt hissed at him was that he ate with publicans and sinners. He recognized no slavery

except slavery to unrighteousness, and his tenderest considerations and greatest sacrifices were for its subjects. The lowest of men he called his brethren, and commended anything done for them as special service to him.

Prior to Jesus, children, generally speaking, were subordinated to a narrow interpretation of the interests of parents or society. If these interests seemed to demand the subjection of the children even to slavery or to death, slavery or death was imposed with brutal sternness. Jesus revolutionized nothing more radically than this. No phase of the influence of his life is sweeter to contemplate than the new meaning it gave to child life. The emancipation of children and the glorification of childhood began with the command, Relation to
Children. "Suffer little children and forbid them not, to come unto me: for of such is the kingdom of heaven." Wherever his spirit and word have taken hold of the thoughts and affections of men a peculiar sanctity has gathered about childhood, and parents and states have learned to make sacrifice for children. More than this, the blessing of the child brought a double blessing to the mother. In the progress of time it wrought the exaltation of motherhood, the social uplift of woman.

Whatever truths he formulated on these and other subjects took an exalted character and a peculiar depth of meaning from the power and dignity of his personality. Simple sayings current in the speech of his people were transformed, as they came from his lips, into revelations of new realms of thought, new vistas of hope and promise for the race. In his mind the facts of life were rearranged into new relations. What had been high

in the thoughts of men he made low, and things low he exalted into matters of tremendous importance and significance. Of life and death as men were wont to speak of them he seldom or never spoke.

In his thought life is activity in faith, righteousness, truth, and love, and the life of faith, righteousness, truth, and love has in it the power and essence of eternity. "He that heareth my word," he declared, "and believeth on him that sent me, hath everlasting life."

The life and doctrine of Jesus were destined to modify in the course of time every phase of educational activity, to revolutionize its aims, principles, and methods. In his utterances were involved the following propositions affecting education :

1. God is the father of all, and men are brethren. In this thought there is no room for those social distinctions, as of caste or slavery, which had previously been prominent determining factors in educational schemes.

2. The nations are but constituent elements in the comprehensive unit humanity, and guardians of their individual members.

3. Individuality is of primary importance. Every man is the responsible steward of his personal endowments as the gifts of God, and is a possible heir of eternal life.

4. The wife is the friend and companion of her husband.

5. Children are the gifts of God, and are to be nurtured for him.

6. Morality is loving recognition of the will of God, the eternal Father, and cheerful obedience to it.

7. A man's personality has its supreme dignity and inviolability in that it is, in however limited a way, an expression of the personality of God.

The public activity of Jesus consisted mainly in teaching. Rabbi, teacher, was the term by which he was commonly addressed. Measured by the The Pedagogy of Jesus. nature of the lessons he taught, by his method of presenting them, by the number of persons whom they have reached, and by the results they have accomplished, he was the greatest of all teachers. An analysis of his teaching as recorded in the gospels reveals the following as its chief characteristics :

1. *He set before his disciples ideal perfection as the fundamental aim of life, and inspired them to seek it.* The kingdom of God which he urged upon men was primarily an exalted conception of character. "Not every one," he declared, "that saith unto me, Lord, Lord, shall enter into the kingdom of heaven ; but he that doeth the will of my Father which is in heaven." "For I say unto you, That except your righteousness shall exceed the righteousness of the scribes and Pharisees, ye shall in no case enter into the kingdom of heaven." How exacting his ideal was may be inferred from the words,—“every idle word that men shall speak, they shall give account thereof in the day of judgment.”

2. *He had supreme confidence in men and in the lessons he taught them.* Though he asked men to believe in him as they believed in God, yet the faith he demanded of them is scarcely more astonishing than the faith he gave to them in return. In the most ignorant and degraded of men he found some traces of kinship to himself, the possibility of realizing his lofty ideals of life. In this he stands alone. First among the world's great teachers, he gave his attention most to the poor and the lowly, to the moral wrecks of society. Where others found only a hopeless mass of humanity doomed to a lower order of existence and unworthy of consideration, there he found the greatest challenge to hope, effort, and sacrificial love. The climax in the series of testimonials which he sent to John the Baptist was the declaration that "the poor have the gospel preached to them." To publicans, the social pariahs

of his day, and to sinners, he taught the noblest and most gracious truths that men have ever heard ; and finally he gave the supreme test of confidence in both men and truth by laying down his life for them.

3. *He taught vital ideas and principles of life, fundamental truths.* In this Jesus is distinguished from the great social reformers who preceded him. Their schemes, generally speaking, were static. They planned some form of social organization in which all the parts of the social fabric should be so adjusted to one another that regularity and order should prevail throughout, and the whole organism act as smoothly as properly adjusted and well-oiled machinery. This is as true of the social ideals of Plato and Aristotle as it is of the scheme of Confucius. In startling contrast is the declaration of Jesus, "Think not that I am come to send peace on earth ; I came not to send peace, but a sword." This characteristic utterance, fraught with deep significance, has been actualized in centuries of history with inestimable benefit to the race.

Discussions of forms of civil and religious government, cumbersome details of moral law, descriptions of civil and religious ceremonial, do not occur in the gospel narratives. Jesus did not seek to fossilize human life, but to spiritualize it. He did not seek to reform men or society mechanically from without, but to transform it from within by cultivating insight into truth and enthusiasm for righteous living. The very prayer he taught his disciples was not enjoined upon them as a formula to be committed to memory for repetition, but as a model for illustration.

Men must not study the words of Jesus to learn the *manner* of conducting their daily life. They will not find it there ; but they may find depicted the salient features of the noblest possible type of human character, and answers to the profoundest and most necessary questions that have ever stirred the souls of men. For the words God, neighbor, man, child, life, death, suffering, peace, faith, love, Jesus has given the loftiest, the ultimate definitions.

4. *He was a master of the art of asking questions.* There are three conditions to successful questioning,—well-defined purpose, mastery of the subject of inquiry, and knowledge of the mental

condition of the person questioned. In the field in which Jesus employed the art, he had perfect command of these. With matchless skill he caused new ideas to flash into the minds of his disciples, or exposed the hypocrisy of the emissaries sent to entrap him and baffled those who sent them. The learned scribes, disciplined to the method by the questioning of their schools, were led by series of questions from one admission to another until they had unwittingly and to their confusion formulated most searching and scathing condemnation of themselves.

5. *His statements were majestic in their simplicity, and his illustrations taken from the most familiar objects.* Nothing gives more force to the words, "I seek not mine own glory," than his manner of teaching. That was the most natural and unassuming teaching ever done. Many of the sublimest truths he uttered were taught to humble individuals in places remote from the notice of men. The lessons were always adapted to the intelligence of his hearers and to their range of information. In his teaching, birds of the air and lilies of the field illustrate the unfailing providence of God ; the welcome home of the prodigal son, God's forgiving love ; the facts of Palestinian shepherd life, his own tender love for the people and his willingness to make sacrifice for them even to the laying down of his life.

6. *His lessons were given as occasion called for them ; and, therefore, found the minds of the hearers in the attitude of expectant attention.* With one or two notable exceptions, the utterances of Jesus do not seem to have been set discourses. That is a remarkable feature of his teaching. Many of the most important truths that ever came from his lips were proclaimed on what appear like chance occasions.

When a Samaritan woman asked in surprise why he, a Jew, asked a drink of water of her, a Samaritan, he answered her question and aroused curiosity to know more of him by telling her that he had living water to give, "a well springing up into everlasting life." Finally he responded to her eagerness to know by declaring to her as apparently he had not yet to the public or to his disciples, that he was the Messiah. When his disciples

quarrelled with respect to their positions in the kingdom which they expected him to establish, he taught them the new measure of greatness, service. To arouse their attention to the highest degree of intensity and ingrain the lesson into their lives, he performed for them the office of a menial, washing their feet.

Probably the most striking of all is this. Plato had written a lengthy discourse on the immortality of the soul, while Jesus, who wrought such a conviction of immortality as to change the trend of history, never formally discussed it. When he mentioned it, however, it was under such circumstances that the words sank deep into the souls of his hearers to be retained in the fervor of an indestructible love. To Martha weeping at the death of her brother he said, "I am the resurrection and the life : he that believeth in me, though he were dead, yet shall he live." To his disciples sorrowful at the announcement of his approaching death, he said, "In my Father's house are many mansions. . . . I go to prepare a place for you."

7. *He was the embodiment of what he taught.* One of his characteristic phrases was, "I am." He taught lessons of faith, and in faith he made absolute surrender of himself to God and humanity. He taught truth, and he lived it. He asked men to be righteous, and he was a new revelation of righteousness. Compared with the acts and precepts of his life, the old codes of law became brutal with iniquity. He commanded men to love, and he was love. The love that could treat the sin-stained woman of the street with dignity and compassion, that could transcend the hatred of the Jew for the Samaritan, that could hush the groans of the anguished with the tenderness of its touch and waken hope in the poor and the sinful, that in the hour of agony could forgive the crucifiers, was a love that passes understanding.

These characteristics are fundamental principles of pedagogy, and of universal application. Every teacher to be a master in his profession must have high ideals of character, must have confidence in his work and his

pupils, must be able to subordinate everything to that which is fundamental and vital, must be skilful in questioning, able to adapt instruction to the capacity of his pupils, ready to create and take advantage of expectant attention, and, above all, be saturated with that which he wishes to teach.

IX

EARLY CHRISTIAN EDUCATION

It is very proper to call Jesus the Great Teacher, but it was a long way from him to a realization of the truths he taught in any considerable portion of humanity, and a much longer way to anything like a full realization of his spirit in educational activity.

Early in the fourth century Christianity became the legal religion of the Roman Empire. Constantine placed the cross on his banner in 312. The interval between the humble beginning in Jerusalem and this date was a period of heroic missionary effort and cruel persecutions. During this time the pagan school work in the empire was most highly organized and most vigorous. Naturally, Christianity exercised no influence over it. Whatever secular education the pagan converts, with few exceptions, received, they received in the pagan schools.

It is well to bear in mind, however, that every congregation was, in a very true and important sense, a school. The members met not only for worship, but also to receive instruction in the facts and principles of their religion. As schools of instruction, the congregation at first closely resembled the Jewish synagogue and Bible school. Later, especially in the East, it resembled more closely the Greek philosophical school. The great moral victory

Early Status
of Church.

The
Congregations
as Schools.

of Christianity in the Roman Empire attests the efficacy of the teaching.

Early in the history of the church, the candidates for baptism, whether pagan converts or children of Christian parents, formed a distinct body. When churches were erected a special part thereof was assigned to them, and they were dismissed before the celebration of the eucharist. They received special instruction to prepare them for admission to church membership. This was known as catechetical instruction, from the method of teaching, and the people who received it were called catechumens. The terms are still in use.

In many of the churches a special officer, known as catechist, was appointed to give this instruction. Thus the catechetical schools arose. The first catechist of whom there is definite record was Pantænus, who taught in Alexandria as early as 181, making the school at Alexandria the first known catechetical school.

When there were churches, the instruction was given either in the church itself or in a school building erected for the purpose. The catechumens studied the commandments, the Lord's prayer, other portions of Scripture, and a confession of faith, or creed.

The best of the catechetical schools were located at the episcopal seats. Here the instruction was often extended to prepare young men for the ministry of the church. Late in the fourth century the trivium was sometimes introduced, and then the Christian teacher took the place of the old grammaticus.

This was the beginning of the schools that in the Middle Ages became known as episcopal, or cathedral schools.

The most famous of all the catechetical schools was the one at Alexandria. It had illustrious teachers, and developed into a high-grade theological seminary. Besides the theological study, there was instruction in philology, rhetoric, philosophy, and mathematics. No salaries were paid the teachers, but rich catechumens frequently gave them gifts. The development of this school was due to its proximity to the University of Alexandria.

X

MONASTIC EDUCATION

(5th-12th Century)

FROM the fifth to the twelfth century the monastery was the predominant factor in the education of Western Europe. The twelfth century saw the beginning of an institution, the modern university, which soon took from the monastic school its supremacy. Before considering the education of the period it is well to review the state of society which conditioned it.

In 410, Alaric the Goth sacked Rome. This event was followed by those movements and conquests of different Germanic tribes within the limits of the Western Empire which so broke it into fragments and changed the character of the parts as to form the beginnings of the modern nations of nearly all Western Europe. The last waves of these barbarian movements were the incursions of the Norsemen. These did not finally cease until well on into the eleventh century.

Historical
Review.

Out of these Germanic conquests grew the feudal system. It prevailed from the tenth to the end of the thirteenth century. To this period and to the system belong the Crusades. They began in 1095 and ended shortly before the thirteenth century closed.

A by no means insignificant episode of this monastic period was the invasion of Europe by the Saracens. In

the eighth century they crossed from the north of Africa and settled in Spain.

Monasticism is founded more or less definitely on the belief that retirement, contemplation, prayer, and ascetic discipline are necessary to the attainment of ideal life, especially of ideal spiritual life. It has manifested itself

Nature and Origin of Monasticism.	at different times, among different races, and in different forms of religion and philosophy.
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It is older than Christianity. There were ascetic communities among the Hebrews, and we have seen that there was an anticipation of mediæval monasticism in the school of Pythagoras at Crotona. Both seem to have exercised some influence upon the early Christians; Pythagorean asceticism through the Neo-Platonists, who had in some measure adopted it, and who furnished converts to the new religion.

Monasticism early took a deep hold on Christendom. There were two primary causes of this. One was the expectation of Christ. The early Christians believed that he would soon reappear to gather the citizens of the celestial kingdom. The belief did not begin to fade from the minds of men till the tenth century. The other cause was the cruel oppression of the Roman Empire and the coarseness, sensuality, and brutality that prevailed in it. Both led Christians to lose the hope of this world, to undervalue its affairs and achievements, and to seek refuge from it in contemplation of the next world and in preparation for it.

This monastic spirit was intensified and the number of monks increased by the terrible persecutions of the Roman emperors. At a later period, the invasions of the Ger-

man barbarians and the disturbed state of feudal society had a similar effect.

The first Christian ascetics were monks in the true sense of the word, people who dwell alone, hermits. Paul, a native of the lower Thebaid in Egypt, was the first. He fled into the desert to escape the persecution of Decius in the middle of the third century. He devoted himself to a solitary religious life. He seems to have had many imitators. The Early History. most influential of these was Anthony. He was moved to take up the ascetic life by hearing read the gospel, "Go and sell that thou hast, and give to the poor . . . and come and follow me." The desert was soon filled with the huts of religious hermits.

In 320, Pachomius organized the first monastic community on Tabennæ, an island in the Nile. This is the form of monasticism that ultimately prevailed. The monks of Pachomius lived on bread and water, with oil, salt, fruits, and vegetables as occasional luxuries. Twice a day they met for prayer, and for communion on Saturday and Sunday. They tilled the soil and wove mats and baskets. Other handicrafts were added later.

Near the middle of the fourth century monasticism was brought to Italy. It rapidly spread over Italy, Gaul, Spain, and Britain.

The special interest of the student of education in the monasticism of the West begins with the work of John Cassian. He had been a monk in Bethlehem and had spent much time among the monks John Cassian. in Egypt. He returned to his native land and founded a monastery at Marseilles in 404, and aided in the founding

of another. These monasteries began a departure in European history, they became schools as well as religious retreats. The pagan schools of the Empire were dead or dying, and a new power undertook the work which they laid down: the grammaticus and the philosopher gave place to the Christian monk.

Cassian was the pioneer, but the man who, above all others, deserves the credit for organizing the monastic school work of the Middle Ages was St. Benédict, the founder of the order of the Benedictines. He established a monastery at Monte Cassino, near Naples, in 528. The rule of Benedict included three things,—work, prayer, and teaching.

The rivals of the Benedictines in activity were the monks from the Irish monastery of Columba on the island of Iona, on the west coast of Scotland. The rule of Columba was very much like that of Benedict.

When the West was rent and torn and trampled over by the fierce northern invaders and the soil was drenched with the blood of ruthless and terrible battles, the monks, especially the followers of Benedict and Columba, were the pioneers of the new civilization of Europe. Steadily and patiently they established monasteries, and by precept and example taught the rough warriors who had destroyed the great empire to labor, to pray, and to study.

Their monasteries became asylums for the oppressed, fortresses against violence, missionary stations for the conversion of the heathen, repositories of learning.

The earlier monastic buildings have all disappeared, but there is left to us the plan of the Benedictine monas-

tery of St. Gall in Switzerland, erected about 820. This monastery is interesting because it marks the eastern limit of the missionary activity of the Irish monks. It is profitable to study the plan of it because of the light it throws upon the nature and services of the institution.

The plan presents a great group of buildings. The nucleus of all is the large church. On one side of the eastern end is the scriptorium, or writing-room, with the library over it. Attached to

The Monastery.

the church on the south side are the covered courts of the cloister, where the monks could take exercise shut off from the outer world. Connected with the cloister on the east side and attached to the transept of the church is the common sitting-room of the monks with the dormitory over it. The dining-room and kitchen are attached to the south side of the cloister.

To the east of the church is another convent building. It contains the cloister, chapel, dining-room, dormitory, and school-room for the novices, called oblati. To the north of the church is the school for the externs, externi, pupils who do not intend to devote themselves to the monastic life.

There are rooms for strange monks and other visitors, an infirmary, a dwelling-place for the abbot, and one for the head-master of the outer school. To the south of all are workshops for shoemakers, saddlers, cutlers, tanners, smiths, and other artisans. There are separate quarters for servants. There are also a granary, threshing-floor, mill, ox-sheds, sheepfolds, stables, a piggery, duck-houses, and a poultry-yard. To the east of this group is a large kitchen-garden. Besides the

garden an extensive farm belonged to the establishment. This was a rich monastery.

In considering the courses of study in the monastic schools, the student must remember that the modern languages of Europe then existed only in crude popular dialects. These dialects were spoken side by side with numberless others. For the scholar there was but one language, the Latin, the language of the old Empire, which the church now in a sense replaced.

The first subject studied was the alphabet. The letters were written on tables. The pupils learned their names by heart, and to recognize the letters them-
Primary Instruction. selves when pointed out. They were prepared to read by spelling, syllables and simple words at first.

The *Latin psalter* generally was the reading book. It was read and reread until the pupils knew it by heart. Many a boy could recite his *psalter* without ever knowing a line of its meaning.

The pupils also learned to write. They imitated copies with a stylus on wax tablets. Later, they learned to write on parchment with quill and ink.

They were taught to sing the service of the church. A little elementary work in arithmetic was done.

After the *psalter* was learned, the pupils began to commit declensions, conjugations, and lists of words. As early, at least, as the eleventh century pupils learned Latin conversation books by heart.

What is said of secondary and higher education must be accepted in a very general way. The courses of study varied much in different monasteries, and even

in the same monastery at different times. Sometimes during long periods the educational spirit was low in one monastery, while another developed an enthusiasm that made it a centre of learning far in advance of others both in extent of course and in character of work done.

Secondary
Instruction.

The secondary course was the trivium,—grammar, dialectic, or logic, and rhetoric. This was a legacy, as was also the higher course, from the old Roman schools. It was, however, considerably impoverished, largely because the old literary spirit was lacking.

The principal study was grammar. Donatus and Priscian were the authorities. The matter was presented in the form of question and answer. The reading was connected with the study of grammar, and was mainly subordinated to grammatical purposes, though morals also were not lost sight of. Æsop's fables, maxims, and proverbs were copied and committed to memory. Vergil was read, and some Christian poets.

The attention given to rhetoric was rather slight. Cicero and Quintilian were studied. Cicero's *Rhetorica ad Herennium* was most studied.

In the Irish monasteries, where, as a rule, the scholarship seems to have been broadest, Greek was also studied, especially in the eighth and ninth centuries.

The higher course was the quadrivium,—arithmetic, geometry, astronomy, and music. It was much less popular than the trivium. Generally, dialectics was continued in this course.

Higher
Instruction.

In astronomy, the names and courses of the stars and constellations were studied. The relation of astronomy

to the fixing of religious festivals gave importance to the study. The *Institutio Arithmetica* and the *De Musica* of Boethius were the texts on arithmetic and music. Geometry frequently had added to it geography and natural history. Till the twelfth century the study included four books of *Euclid*.

Generally text-books were lacking. In such case the teacher dictated the lessons. The pupils took them down on wax tablets and committed them to memory. In advanced work the lessons were often copied on parchment.

As already indicated, there were two classes of pupils : those who intended to devote themselves to the monastic life, oblati, and those who sought only educational advantages, externi. The oblati were maintained free. The externs received their tuition free, but paid for their maintenance. In cases of poverty they were maintained free, if the monastery could afford it. For the purpose, gifts were encouraged.

The convents offered precious advantages for women in the Middle Ages. When Benedict founded his order, his sister, known in ecclesiastical history as Sister Scholastica, established a corresponding institution for women. The Irish and English monks also established female convents that were active in female education. English nuns opened the first schools for girls in Germany. The courses of study in the female convents were not very extensive.

Occasionally the courses of study in the monasteries were considerably fuller than those described ; but,

generally speaking, to the student of to-day they seem to have been meagre enough. The principal causes of this deserve special mention. They were two.

The first great triumph of Christianity was its moral conquest of the Roman Empire. It was the issue of a stern conflict with the most extensive and glaring mass of corruption, sensuality, vice, and crime the world perhaps has ever known, and with almost unlimited and irresponsible imperial authority most cruelly and brutally exercised. When paganism went down before the cross, its literature, art, and philosophy went down with it. In the minds of the victors they were too intimately associated with it to permit any but the most carefully sifted portions to survive. In 398 the council of Carthage prohibited the reading of secular books even by the bishops. When the persecutions and the sins from which the early Christians escaped are considered, it is not surprising that, following a natural law of the mind, they regarded the gods of their former worship as evil spirits responsible for both. The impure escapades of the gods and the goddesses so prominent in the tales of the poets confirmed them in their conviction.

First Cause of
Meagreness.

The second cause is to be sought in the character and condition of the people among whom the monks labored. Their pupils were mostly the children and later descendants of the warriors who so radically changed the map and the life of Europe. Among them the demand for broad literary culture could not have been very great. Taine, in his history of English literature, illustrates the fierce and untamed spirit

The Second
Cause.

of these people by quoting a love scene from an old Norse poem.

The daughter of the Danish Jarl, seeing Egil taking his seat near her, repels him with scorn: "Seldom have you provided the wolves with hot meat, never during the whole autumn have you seen a raven croaking over the carnage."

Egil pacified her: "I have marched with my bloody sword, and the raven has followed me. Furiously we fought, the fire passed over the dwellings of men; we have sent to sleep in blood those who kept the gates."

Think of the people whose love-making was so delicate as that bending patiently over the tasks of the school-room!

Whether they taught much or little, whether they taught it well or ill, the most important mission of the monks of that olden time lay not in the teaching of Latin or logic; it was a moral one. They taught the rude warriors from the northern forests to adopt the manners of a more quiet and civilized life. With what magnificent spirit at least some of them entered upon their work nothing more beautifully tells than the story of Bæda, the Venerable Bede, who died in 755.

He spent his whole life at the monastery of Jarrow in the north of England. "While attentive to the rule of my order and the service of the church," he said in his account of his life, "my constant pleasure lay in learning, or teaching, or writing." He mastered the whole range of the learning of his time. He knew Greek and had a wide command of Latin literature. He wrote

True Office of
Mediæval
Monks.

forty-five books. He prepared text-books covering all that was then known of astronomy, meteorology, physics, music, philosophy, grammar, rhetoric, arithmetic, and medicine. He was the first English historian.

“Two weeks before Easter, 755, the old man was seized with extreme weakness and loss of breath,” Greene tells us in his incomparable history of the English people. “He still preserved, however, his usual pleasantness and gay good-humor, and in spite of prolonged sleeplessness continued his lectures to the pupils about him. Verses of his own English tongue broke from time to time from the master’s lips,—rude rhymes that told how before the ‘needfare,’ Death’s stern ‘must go,’ none can enough bethink him what is to be his doom for good or ill. The tears of Bæda’s scholars mingled with his song. ‘We never read without weeping,’ writes one of them. So the days rolled on to Ascension-tide, and still master and pupils toiled at their work, for Bæda longed to bring to an end his version of St. John’s gospel into the English tongue, and his extracts from Bishop Isidore. ‘I don’t want my boys to read a lie,’ he answered those who would have had him rest, ‘or to work to no purpose after I am gone.’

“A few days before Ascension-tide his sickness grew upon him, but he spent the whole day in teaching, only saying cheerfully to his scholars, ‘Learn with what speed you may; I know not how long I may last.’ The dawn broke on another sleepless night, and again the old man called his scholars round him and bade them write. ‘There is still a chapter wanting,’ said the scribe, as the morning drew on, ‘and it is hard for thee to question

thyself any longer.' 'It is easily done,' said Bæda; 'take thy pen and write quickly.' Amid tears and farewells the day wore on to even-tide. 'There is yet one sentence unwritten, dear master,' said the boy. 'Write it quickly,' bade the dying man. 'It is finished now,' said the little scribe at last. 'You speak truth,' said the master; 'all is finished now.' Placed upon the pavement, his head supported in his scholar's arms, his face turned to the spot where he was wont to pray, Bæda chanted the solemn 'Glory to God.' As his voice reached the close of his song, he passed quietly away."

Contemporaneously with the growth of the monastic schools there was a multiplication of episcopal schools.

Episcopal, or
Cathedral,
Schools.

Though they were designed to prepare young men for the priesthood, other students were also admitted. In the course of time the secular course was made to embrace the seven liberal arts, the trivium and quadrivium. Theology received more attention than in the monastic schools. Sometimes monks were placed at the head of these schools.

Through the influence of Chrodegang, Bishop of Metz, the cathedral schools received a peculiar organization in the eighth century. The priests connected with the cathedral churches were organized into something like monastic brotherhoods. A part of their duty was to conduct the schools connected with the cathedrals.

Parochial
Schools.

The Middle Ages also saw the beginning of the modern parochial school, a continuation of the catechetical school of the early church. It was under the supervision of the parish priest. The primary object naturally was instruction in the elements

of religion. To the religious instruction were sometimes added reading and writing, and the pupils were taught to sing the music of the church.

In all these schools, monastic, parochial, and cathedral, the discipline was severe. There was a quite common belief that the devil was in the hearts of the boys and could be driven out with flagellations.

In many monasteries the boys were flogged periodically. As late as the fourteenth century a schoolmaster was sometimes introduced to his office by presenting him with a ferule and a rod, and by requiring him to flog a boy publicly, to prove, no doubt, that he was equal to the high demands of his office.

School
Discipline.

XI

LATER DEVELOPMENT OF MONASTIC TYPE OF EDUCATION

THE title great was never more appropriately applied to any man than it was to Charles, the son of Pepin, King of the Franks. He was a giant in body, and equally gigantic intellectually and morally. When Pope Leo III. placed the crown on his head on Christmas-day, 800, it did look as if there was good ground
Charlemagne.

for the belief that the corpse of the Western Roman Empire might be brought back to life again. Nothing indicates more plainly the colossal proportions of Charles than the rapidity with which the empire to which he had given such a high degree of solidity and strength went to pieces in the hands of his weaker successors, and the persistency with which many of the good results of his efforts continued to manifest themselves in the fragments.

With the same intelligence and energy with which he added countries and tribes to the heritage of his father and suppressed the wild and numerous uprisings of the conquered Saxons, Charlemagne devoted himself to the work of organizing and civilizing his vast dominion. It

Plans for his Empire. was not a task for an infant. His empire was a wonderfully heterogeneous mass. Fairly civilized Christian communities formed one extreme, and fierce pagan tribes the other. Besides care-

fully planning for it an excellent form of civil organization, Charlemagne sought to give it unity by means of the Christian religion. The compulsory baptism of vanquished pagans in groups of thousands make his efforts at Christianizing his people appear mechanical and ridiculous, but there was nothing mechanical in his ultimate plans. His design was to make the offices of religion effective through an educated clergy, and, so far as possible, through an educated laity.

One of the notable things in the history of mediæval education is the document in which Charles urges reform of the schools, 787. "Be it known to your devotion," the paper reads, "pleasing to God, that in conjunction with our faithful we have judged it to be of utility that, in the bishoprics and monasteries committed by Christ's favor to our

Instructions
for School
Reforms.

charge, care should be taken that there shall be not only a regular manner of life and one conformable to holy religion, but also the study of letters, each to teach and learn them according to his ability and the divine assistance. . . . If false speaking is to be shunned by all men, especially should it be shunned by those who have elected to be servants of the truth. During past years we have often received letters from different monasteries, informing us that at their sacred services the brethren offered up prayers on our behalf; and we have observed that the thoughts contained in these letters, though in themselves most just, were expressed in uncouth language. . . . Hence there has arisen in our minds the fear lest, if the skill to write rightly were thus lacking, so, too, would the power of rightly comprehending the

sacred Scriptures be far less than was fitting. . . . We exhort you, therefore, not only not to neglect the study of letters, but to apply yourselves thereto with perseverance. . . . Let there, therefore, be chosen for this work men who are both able and willing to learn and also desirous of instructing others ; and let them apply themselves to the work with a zeal equalling the earnestness with which we recommend it to them."

To give a new impetus to education Charlemagne imported teachers of singing, arithmetic, and grammar from Rome to visit the monasteries and help revive the teaching there. He invited learned men from different parts of Europe to his court. The most famous of these was Alcuin, of England, the best-known scholar of his day. Alcuin was a sort of superintendent of instruction. For a time he had charge of the Palace school, founded at the court to serve as a model school. It was attended by the children of the nobles. Charlemagne had in it four sons and two daughters, and sometimes he was a pupil in it himself. For he was a student. With much pains he mastered the Latin tongue, and he also understood Greek. One of the pleasing pictures of the time is that of Charles at an advanced age trying eagerly and patiently to write neatly on parchment with the great hand with which he had wielded his ponderous sword in many a battle.

He was very much displeased with the indolence and indifference which he observed among some of the scions of noble families. He rebuked them severely for it, and declared that they should have neither government

His
Educational
Efforts.

appointments nor bishoprics unless they were better educated than others.

He appointed Theodulph bishop of Orleans. Theodulph was in warm sympathy with his plans. He founded a number of important schools. He ordered the clergy of his diocese to institute parish schools in which the faithful might receive elementary instruction free of cost.

Soon after the death of Charles his empire commenced to disintegrate, but the good results of his efforts did not entirely perish. He had put new life into many of the monastic and episcopal schools, had in many places advanced the character of parochial instruction, and the Palace school survived.

About fifty years after the death of Charlemagne the English King Alfred undertook educational work similar to his. He tried to put energy into existing schools, and established a court school for his own children and the sons of the nobles. He himself supervised it. In order to extend the benefits of education as widely as possible among his people, he personally translated into the English tongue Bæda's history of the English people, the *Consolations* of Boethius, and other works well thought of in his day.

While learning was thus making advancement in the West and giving vigorous promise for the future, affairs were quite different in the Eastern, or Byzantine, Empire. There were signs of decay instead of growth, evidences of decline instead of progress. In the fifth century the University of Alexandria began to dwindle away, and it ceased to exist

Alfred the
Great.

Decline of Old
Institutions in
the East.

in the seventh. The Christian emperors at first gave encouragement to the schools of rhetoric and philosophy which still made Athens a university city, but these schools, too, eventually began to fail, and were closed by imperial decree in 529.

Monasteries and monastic schools, however, multiplied. In the fourth century Basil the Great, bishop of Cæsarea, framed a monastic rule that absorbed all others in the East, and continues to be the code of the Greek church. Though devotion to learning is not so pronounced in it as it is in St. Benedict's, yet, in some measure, Basil did for the East what Benedict did for the West. In fact, it is likely that the teaching of the Eastern monks suggested school work to the Western.

There was a university, too, that flourished in the decay of the older schools of higher learning. In the latter part of the fourth century the emperors established a Christian university in Constantinople. It prospered a long time, and, after a period of decay, it was refounded in the ninth century. It then still maintained chairs in Greek literature, geometry, and astronomy. It had another period of special activity in the eleventh century, and was particularly famous at that time for its work in logic.

After Charlemagne, the interest in the ecclesiastical schools of the West centres in the labors of the schoolastics, or schoolmen. The name scholastic is derived from the title given to an authorized teacher in a monastic or an episcopal school, doctor scholasticus, but it is now generally applied to any one of

New

Institutions.

Work of the
Schoolmen.

those teachers who represented the philosophical activity of the Middle Ages.

The schoolmen sought to bring Greek philosophy, particularly that of Aristotle, into the service of theology. They endeavored to find philosophic solutions for the great problems of theology, and give philosophic form and validity to its propositions.

The central question of scholastic philosophy was the nature of universal or abstract ideas,—the relation of the universal to the individual. The schoolmen, naturally, were either realists—adherents to some form of the doctrine that universals have real, objective existence—or nominalists,—upholders of the doctrine that the name only is universal, being applied universally because of similar attributes found in individuals. On the basis of these theories they sought to explain the doctrines of the trinity, the incarnation, transubstantiation, predestination, and the like.

It was through the schoolmen mainly that Charlemagne exerted an influence on the education of after-times. They continued the tradition of History of
Scholasticism. learning established by his Palace school. Scholasticism is generally assumed to have begun in the ninth century with John Scotus Erigena, head of the Palace school of Charles the Bald, grandson of Charlemagne. Unlike the later schoolmen, he was in philosophy a Neo-Platonist rather than an Aristotelian. Scholastic activity, however, was greatest from the end of the eleventh to the beginning of the fourteenth century. It reached its high tide in the great work of the Dominican Thomas Aquinas and of his powerful rival the

Franciscan Duns Scotus. Aquinas gave such profound and systematic formulation to the doctrines of the church that he was sainted and assigned a festival day as prominent as that of the greatest church fathers.

The later scholastics had the advantage of the more complete knowledge of the works of Aristotle obtained through the Saracen scholars.

The boldest and most famous of the scholastic teachers of the twelfth century was Abelard, who taught principally in Paris. Much of the interest in his life centres in the romantic and pathetic story of his relation to Heloise; but his work deserves more than passing mention because of its brilliancy and because it was the basis of that intellectual activity in which originated the University of Paris.

From boyhood he was a keen and untiring student. Though he had the ablest teachers of his day, he overwhelmed them in argument. The greatest of them surrendered his philosophical position to the logic of his pupil. He had a handsome and magnetic presence, and he presented his doctrines with such boldness and eloquence that thousands of students flocked to him from all over Europe. The great sorrow of his life and the condemnation of some of his doctrines by the church authorities once compelled him to seek refuge in the life of a hermit in a desert place. Nothing tells us more plainly the influence and popularity of the man than the fact that numbers of students sought him in his solitude and dwelt about him in huts and tents.

Many of the writings of the schoolmen furnish reading that is dreary enough, and much of their argument now

sounds like useless and meaningless hair-splitting; but it is an easy matter to under-estimate them and their achievements. Some were brainy men, Services of
Schoolmen. thoroughly sincere, and they performed val-
iant service. They kept alive the tradition of learning and philosophic activity; and, whether they always intended it or not, they championed and maintained the rights and dignity of the human reason. Their method itself did that, but some went further. "Authority is derived from reason," said Erigena, the first of them, "and not reason from authority; and when the former is not confirmed by the latter it possesses no value." Abelard boldly assumed the same proposition.

The schoolmen found theology a confused mass of traditional doctrine, and they made it a systematic science, the first great science developed by modern Europeans.

XII

NEW EDUCATIONAL FORCES

MONASTICISM meant renunciation of the world. As we have seen, monasticism gave the dominant tone to the intellectual and moral activity of the Middle Ages. In the latter half of the period three new educational factors, very different in character, exerted influence side by side with the cathedral and monastic schools, and contributed something to the origin of the mediæval universities. These were the Mohammedan learning, chivalry, and the commercial cities with their schools, the burgher schools.

When, early in the eighth century, the Saracens overwhelmed Spain and swarmed across the Pyrenees into France, western Christendom trembled with fear. There was danger that it might lose its very existence. Nothing but disaster seemed to come with the invaders until the great battle of Tours turned them back into Spain ; but it is a question whether the benefits they eventually brought to Europe were not greater than the evils which they inflicted. Scarcely were the Saracens settled in their extensive conquests when they developed a remarkable intellectual activity. Their conquests brought them to the feet of the masters of Greek thought and in contact with the learning of India. They endeavored to follow the best efforts that the Greek mind made when the Greek mind was at its

The Moham-
medans.

best. They translated the works of Aristotle, and used his logic and philosophy in defence of their religious tenets. It was through them that the Christian scholastics finally completed their command of all that was left of the writings of their master of thought.

Stimulated by their knowledge of Greek, they wrought out grammars and lexicographies of their language, and gave considerable attention to rhetoric and literary criticism. They developed, also, a complete system of laws based on the *Koran*.

It was not, however, through their interest in literature and philosophy that the Saracens became most helpful to the Christians of the West. The scientific activity of modern Europe commenced in their schools and laboratories. Their scholars translated the works of Euclid as well as those of Aristotle. They got hold of all the Greeks and Hindus had known of algebra and remodelled it into its modern form. They also founded a new trigonometry on a Greek basis. Perhaps best of all, they learned the Hindu arithmetical notation and gave it to the West.

Scientific
Activity.

Their scientific achievements, however, did not stop here. They repeated the feat of the Alexandrian geographers in the measurement of a degree on a meridian, and they thus determined the size of the earth. They applied the pendulum to the measurement of time, and they catalogued the stars. In their laboratories they tried to find a means of changing all metals into gold, produce an elixir that should indefinitely prolong youthful and vigorous life, and discover the real nature and relation of things. In their efforts they discovered alcohol, and

nitric and sulphuric acids. This scientific and philosophic effort is called alchemy, and it was the beginning of modern chemistry.

This intellectual enthusiasm led to the founding and liberal endowment of many schools in Asia, Africa, and Europe. The most famous of the European schools were at Cordova, Grenada, and Seville. Christian students resorted to these schools in large numbers and were warmly welcomed. When they returned, they carried back with them to the different parts of Europe prolific seeds of a new intellectual life.

Besides these higher schools there were elementary schools for both boys and girls. The main subject of study in these schools was, and, in all Mohammedan countries, continues to be, the *Koran*. Reading and writing were taught. The *Koran* was the reading book.

In the eleventh century the Saracen schools began to decline, and there has been no great revival of learning in a Mohammedan country since. Study has narrowed closely to the *Koran* and such knowledge as is most intimately associated with it.

In more direct contrast with monastic learning was the training of chivalry. The knight was the successor of the Germanic warrior chieftain. Chivalry, on its moral side, embodied the better elements of the old warrior character refined and ennobled by the influence of Christianity. It became a well-defined and established institution in the eleventh century.

The monastic ideal was evidently one-sided, incom-

plete. The monk not merely neglected to cultivate the body, he learned to fear it and scorn it. He regarded it as a clog upon the soul, a source of temptation and corruption. He glorified the soul. He endeavored with the trivium and quadrivium to give such culture to the mind as would aid the soul in its search for perfection. The knight, on the contrary, glorified the body. On many a field of battle he had learned to appreciate the value of physical strength and vigor, and he devised courses of training to make the body strong and fit it for the pursuits of war and the chase.

There were two periods of training for knighthood, that of the page and that of the esquire. The training of the sons of the lesser nobles was received in the service of the greater nobles and princes.

At the age of seven or eight the sons of the nobles took up their residence at the castles of their feudal superiors. They served there as pages seven or eight years. They were the personal attendants of the master and mistress, especially of the mistress. They waited upon both at table and accompanied them upon the chase, sometimes also following the lord to the camp. They were instructed by the lady of the castle in matters of courtesy, love, and honor. They learned to play musical instruments and sing, and to play chess and other games. From the chaplain they received religious instruction. At the same time they were disciplined in lighter military gymnastics, such as casting the spear, carrying the shield, and marching. The lord also gave them their first lessons in hawking and hunting.

The Page.

As esquires, the boys still served both lord and lady, but the attendance was more especially devoted to the master. They learned to ride, to tilt, to yield
The Esquire. the lance, the sword, and the battle-axe. They accompanied the lord regularly on the chase and in the camp. They carried his shield and his lance. They equipped him in his armor for tourney and for battle. They helped him on his horse and fought by his side. They went to his rescue when hard pressed in battle, protected him when unhorsed, and bore him from the field when wounded. During this period, too, the esquire was supposed to choose his lady-love, for whom he should win fame and glory.

At the age of twenty-one, if he had proved himself worthy, the esquire might assume the vows of knight-
The Knighting. hood. This was done with solemn ceremony. Generally it was preceded by a week of fasting. After a bath in the evening the candidate was conducted to the church, where he spent the night in vigil and prayer. In the morning he made confession and received the eucharist. He offered his sword upon the altar as a sign of his devotion to the church, and redeemed it with a sum of money. He took an oath to succor the distressed, defend religion and the ladies, and keep his knightly character unstained. His sword and spurs were then fastened upon him, and the lord or prince smote him on the shoulder or neck with the flat of his sword, saying, "In the name of God, of St. Michael, and of St. George, I dub thee knight; be brave, bold, and loyal." Sometimes an esquire was knighted much earlier upon the field of battle because of some heroic

deed. All ceremony but the last was then dispensed with.

In the knight's training there was little or no book learning. He was apt to think that reading and writing were matters for priests, monks, and women, not for warriors.

If the monks cultivated the "other-worldly" spirit, the knight cultivated an attractive and fairly high type of "this-worldly" spirit. The monk in his cell sang,—

Educational
Value of
Chivalry.

"Jerusalem the golden,
With milk and honey blessed,
Beneath thy contemplation
Sink heart and voice oppressed.
I know not, O I know not,
What joys await me there,
What radiancy of glory,
What bliss beyond compare."

But the knight sang of the spring-time, of the nightingale and flowers, of love, and of the din of arms. He represented a different type of thought and a different form of morals. His virtues were valor, courtesy, hospitality, and loyalty to his lady-love, his companions in arms, and his sovereign.

The influence of chivalry was deep and extensive. It gave dignity to the secular interests of life. The training and character of the knight were all the more potent in influence because they received the sanction of religion. The knight received the same benediction as the monk. Though his virtues were not generally

XIII

RISE OF THE UNIVERSITIES

THE university was the best product of all that was best in the Middle Age. It was at once the crowning achievement of the age and one of its noblest bequests to that which succeeded. It ranks among the great dynamic agencies that have moulded the social life of the modern world.

The specific sources of the university must be sought in the older church schools, particularly in the cathedral schools and the labors of the schoolmen, and in the influence of the Mohammedan learning, chivalry, and the new city organizations with their schools. But these would not entirely account for it. It is well to keep in mind the fact that chivalry and the new cities themselves were manifestations of the very growth of secular, or lay, interests which they fostered. The accumulating mass of knowledge and literature, the greater complexity of business relations and activity, and the greater and more general intelligence of the people, demanded more extensive and thorough courses of study for the general student, more advanced and special training for the theologian, the lawyer, and the doctor. Most of the universities grew out of monastic or cathedral schools, or sprung up in close connection with them ; but whether they did or did not, they all showed recognition

of the demands of the developing secular interests, and endeavored to meet them.

The history of the modern universities begins with three institutions, the medical school of Salerno, the law school of Bologna, and the theological school of Paris. These institutions had certain characteristics in common. They were special schools for the professional study of advanced students, they were open to the general public, they were free from the rules of monastic orders, and in the course of time had extraordinary privileges granted them by church and state. In other important respects they materially differed from one another. As schools, they were not called universities at first, but *scholæ*, *studia publica*, or *studia generalia*.

Early
Character.

Of the beginning and organization of the school at Salerno there is little positive knowledge. The city had famous physicians in the tenth century. A tradition claims that the school took its specific character and became celebrated through the work of a Carthaginian Christian named Constantine, who settled at Salerno in the latter part of the eleventh century. He had travelled and studied much in the East. He had visited India, Babylon, and Egypt. When he returned to his native city enriched with Eastern lore, he was obliged to flee because suspected of witchcraft. He published many medical works and became famous throughout Europe. But there is evidence that the school was already celebrated in the middle of the eleventh century.

Salerno.

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Salerno.

Rashdall thinks that Latin versions of Greek medical

works survived in southern Italy, and that Salerno became the centre of the medical revival because it was a health resort. Invalids sought relief in the mildness of its climate and the use of its mineral waters.

When its reputation was established students flocked to Salerno in great numbers. They came from Italy, France, and Germany. Most of them had completed the liberal arts course in monastic or episcopal schools, and the institution at Salerno was made a special school, the first specialized professional school since the Roman schools in the West had died. Nothing more attests its liberal character than the fact that Moors and Jews were admitted as students, and that Jews taught in it at a time when Jews generally were despised and persecuted.

The school at Salerno never became a university in the sense in which that word is now used. It was recognized as a part of the University of Naples when that was founded in 1225.

The law school of Bologna, in northern Italy, grew in a somewhat similar way. Irnerius had been a teacher in the "arts" school. In some way he became interested in the study of the civil law. Early in the twelfth century he professed himself a teacher of the whole Roman civil law, and achieved a great revival of that study. Students gathered about him in ever-increasing

numbers. Many who had completed the course settled with him as teachers, "doctors." They continued the work; and, as the fame of the school spread, the number of both doctors and students was enlarged. The beginning of the thirteenth century saw ten thousand gathered there. Early in that

Bologna.

century courses in arts and medicine were added to the organization, and it became a university in the modern sense. In 1360 there was also added a course in theology. Long before that a course in canon, or church, law had been introduced.

The story of the growth of the University of Paris is not quite so simple. There had long been an episcopal school connected with the cathedral of Notre Dame. A series of great teachers made this the most famous centre of learning in Europe at the time. The most brilliant and popular of these teachers was Abelard. While at the head of the school of Notre Dame and afterwards he gave special instruction in theology and philosophy. This was early in the twelfth century. His pupils and successors, the most famous of whom was Peter Lombard, confirmed and established this special theological teaching, and that seems to have been the proper beginning of the University of Paris. Canon law was early added, medicine about 1200, and Paris. civil law in 1679. The pope showered privileges upon it, and its members and friends spoke of Paris as the "mother of universities." Early in the thirteenth century the student body numbered over twenty thousand, a large part of the population of the city.

The most striking feature in the early universities was the nature of their organization. The term university indicates it. The original use of the word differed from its present use. It then meant a community or corporation. The first universities were literary republics organized after the manner of the trade guilds. Bologna will serve well for illustration.

At Bologna the teachers controlled the courses of study, promotions, and the granting of degrees, but the general business management and discipline of the organization was mainly in the hands of the students.

Organization of
University of
Bologna.

As the student body grew large with accessions from many parts of Europe, those from the same province or country lived as close together as possible, forming an organization resembling a guild and based on nationality. From this fact the organizations were known as nations. Each nation, besides other necessary officers, elected a consiliarius, councillor, who was the governing officer of the nation and represented it in the council of the university. The nations, with the help of the councillors, elected a rector, who, aided by the councillors, governed the university as its chief executive officer. Bologna really had two universities, for the nations from beyond the Alps and the Italian nations formed separate organizations, each having its own rector. The bishop of Bologna, like the bishops of other university cities, was the chancellor of the university. He granted the degrees recommended by the teachers, but had little authority.

At Paris the organization was not quite so democratic because of the prominence of the liberal arts course.

Many of the students there were mere boys, and the control of the nations and of the university was mainly in the hands of the teachers. They elected the councillors of the nations, called procurators at Paris, and these elected the rector. Bologna had thirty-five nations, while Paris had only

Organization of
University of
Paris.

four; but those of Paris were subdivided, each division having an organization of its own with a dean at the head.

In the course of the thirteenth century the teachers of the different universities formed organizations of their own, called faculties, or colleges. Each faculty had a dean. The number of these faculties was generally four, philosophy, medicine, law, and theology. These have been retained with an increasing number of subdivisions.

Faculties.

At first the teachers were called doctors; at Paris, masters, *magistri*. When the university organization was tolerably complete, these titles lost their general meaning and became degrees fixed in the order bachelor, master, and doctor.

The universities were early taken under the protection and favor of pope, emperor, and king. The corporate rights which they assumed, like the guilds, were soon confirmed to them by special charter. The patronage of the pope brought the power of the church to their support, and made the degrees and licenses to teach good all over Western Europe.

Privileges and
Discipline.

In cases of civil or criminal misdemeanors, the members of the university were not subject to the jurisdiction of the city authorities, but to that of university authorities elected by themselves. Quite naturally the discipline frequently was lax, and there was much looseness and recklessness among the students. Conflicts with the town people and authorities were quite common, and there were frequent riots resulting in broken heads. The

university generally had the town at its mercy. At first there were no university buildings. The teachers lectured in their own or rented rooms. Because of the character of its organization, it was, therefore, a comparatively easy matter for the whole university to move to another city. In case of conflict between the two, a threat to leave was in most cases sufficient to make the town yield to the school. In some instances, however, large parts of universities did actually move away and establish themselves in other cities. The privileges and charters granted to these institutions by the pope made them comparatively free even from the local church authorities. It was a rule with at least some of them not to elect a bishop or a monk as rector.

The first universities were rapidly followed by others. By the end of the fourteenth century the principal ones established were, Pavia, in Italy; Oxford and Cambridge, in England; Valladolid and Salamanca, in Spain; Montpellier and Orleans, in France; and Prague, Vienna, and Erfurt, in Germany.

To the student of educational history the development of the university marks the transition from Mediæval to

Historic Value of the University. Modern history. For him, Modern history begins with the revival of pagan learning, and the university made that effective. The democratic character of the new institution undoubtedly gave its students much unfortunate license, but it also gave them a broad range of freedom in intellectual activity, and that was the secret of the tremendous power of the university as a social factor, and so it continues to be.

HISTORICAL SUMMARY

Catechetical School of Pantænus, Alexandria	181
Paul, the first Egyptian hermit Middle of 3d century.	
Monastic Community of Pachomius	320
Cathedral Schools with Trivium	4th century.
Cassian's Monastery at Marseilles	404
Benedict's Monastery at Monte Casino	528
St. Columba settled on Iona	563
Chrodegang's organization of Cathedral Schools	8th century.
Alcuin summoned to Charlemagne's court	782
Mohammedan Schools flourish in Spain	9th-11th century.
Chivalry	10th-13th century.
Scholasticism	11th-14th century.
City incorporation	11th century.
Salerno founded	11th century.
Bologna and Paris	12th century.

PART IV

PERIOD OF SUPREMACY OF PAGAN CLASSIC LITERATURE

XIV

THE RENAISSANCE

FOR centuries men had lived in the shadow of the monastery. Under its influence the tone of cultivated thought was sombre. It at least rebuked, if it did not condemn, the natural passions and ambitions of men. The monk grew as naturally out of the Roman and feudal social soil as the pines grow on the hill-sides, and monachism flourished. By the beginning of the eleventh century there had been established fifteen thousand and seventy abbeys of the Benedictine order alone. The monk controlled the leading Dominance of
the Monk, schools, and he was the typical churchman. The priesthood itself conformed to the monastic type. In the eleventh century the celibacy of the clergy was made universal by the decree of Pope Gregory the Seventh.

Monks and monastic orders increased so rapidly that the last great mediæval orders to be established, the Dominicans and Franciscans, received papal sanction only because of the uniqueness of their vows. They were devoted to absolute poverty, and became known as Mendicant Friars. They manifested the monastic type of thought and life in its most radical and intense form. They represented a revival of monastic energy, and endeavored to make themselves popular preachers and gain control of education. These orders arose in the thirteenth century. They accomplished wonders, but

the day of monastic supremacy in learning had passed away, and the next century witnessed many attacks upon the system and the beginning of a decline. The cowed monk was still a prominent and characteristic feature of social life, but some of his glory had faded away.

Knighthood was changing its character. The feudal knight was passing away. With all his faults, he had served a noble purpose. He had represented the health, vigor, and noble possibilities of the life outside of monastic walls. He had created an atmosphere of charming romance about the great events of his day, and had put a crown of glory upon many virtues of our every-day life. He left to the future as a precious heritage the remembrance of these things, together with the tales of the Trouveur and the songs of the Minnesinger and the Troubadour. Even the passing of feudal chivalry was a matter of great moment. It shattered itself in the Crusades, but in the heroic struggles of its dissolution it shattered also many a narrowing and misleading tradition of custom, thought, and superstition.

The citizen, represented at his best by the respectable artisan and substantial merchant, was rapidly multiplying. With less ostentation, but with no less sincerity, he cultivated the virtues which the knight had made beautiful, and gave them broader application. Moreover, he was creating wealth and demanding peace, paving the way to leisure, learning, and the creation of art. He represented the sturdy hope of the coming liberties of men and the uplift of the masses.

The Passing of
the Knight.

The Citizen.

His interests, too, were represented in the universities, and were predominant there in many ways.

Under the influence of the new spirit that pervaded society men made a discovery that thrilled them with the intensity of a new life. Latin had never ceased to be the language of the churchman and the scholar. Through all the Middle Ages Vergil and a few other Latin classic authors had been studied, but chiefly as aids to the mastery of the Latin tongue and not for the sake of the thoughts they expressed. The tradition of the old condemnation lingered. But now, in the fourteenth century, men suddenly found the blood of an intensely human life throbbing in this old literature. They discovered in it the stories of wars and loves like their own, the wisdom of statesmen and the impassioned pleas of orators. The tales of gods and goddesses became revelations of human passions, strength, and beauty. They learned that in the olden time men had been filled with an unrestrained love for things beautiful in nature, such as they had again lately recognized with pleasure in their own souls. They observed, too, that the old writers had been able to express their thoughts and feelings in a polished and charming manner. These discoveries delighted them, and they began to hunt up the old literature and study it with a passionate earnestness that was like intoxication. This new study has been termed by historians the "Revival of Learning" or the "New Learning." It was at once the cause and a phase of a broad historical movement known as the "Renaissance," or new birth.

Nature of the
Renaissance.

The Revival of Learning very naturally began in Italy.

Its first great leader was Petrarch, with Boccaccio a close second. Petrarch lived between 1304 and 1374.

Petrarch. While still a boy his ear was captivated by the musical sweetness of Cicero's language. His devotion to Latin literature in his mature years was little short of a passionate worship. He commenced the study of Greek, but circumstances cut short his effort to master the language. A friend sent him a copy of Homer from Constantinople. He could not read it. "I often embrace it," he wrote, "sighing, 'O great man, how I would like to hear you speak, but death has closed one of my ears and distance the other.'" The two ears were the two men who might have taught him Greek. His contribution to the Renaissance was a Latin epic, *Africa*, and a number of incomparable Italian sonnets.

Boccaccio was born only a few years later. He was more fortunate with respect to Greek than Petrarch. He studied it under Leontius Pilatus, a Calabrian, translating Homer under his instruction. How thoroughly the enthusiasts of the Renaissance were saturated with the classic spirit is indicated by the manner in which Boccaccio stated his birthday. "I was born," he said, "on that day in which men celebrate the glorious return of the son of Jupiter from the defeated realm of Pluto," meaning that he was born on Easter, the day of the resurrection of the Son of God. It sounds like sacrilege now, though it was not so intended. It was, however, unfortunately, prophetic of many a sacrilegious utterance afterwards made in Italy by disciples of the New Learning. Like Petrarch, Boc-

caccio devoted himself to literature. His masterpiece was the *Decameron*, which inspired the first great English poem, the *Canterbury Tales* of Chaucer, and furnished material for it.

The literary productions of Petrarch and Boccaccio gave both men such distinction as to make their influence very great. Enthusiasm for classic learning grew with wonderful rapidity. In 1396, Emanuel Chrysolaus, who had formerly been a Greek teacher in Constantinople and had been sent to Italy to implore help against the Turks, was attracted by this enthusiasm, and settled in Florence as a teacher of Greek literature. Others followed him, but the The Greek Teachers. greatest impetus to this study came from the misfortunes of the East. In 1453 Constantinople fell into the hands of the Turks. This is the most important date in the history of the revival. Greek scholars fled to Italy in large numbers, carrying the literary treasures of their country with them. They were received with open arms.

The New Learning soon found a great ally in the printing press. Attracted by it, German printers hurried into Italy with the new invention. An edition of Vergil was printed in Florence in 1472. The first original book printed in Italy was a Greek grammar, in 1476. The Printing Press. By the end of the fifteenth century more than ten thousand editions of books and pamphlets had been published in Europe.

From the beginning of the enthusiasm there was eager ransacking of out-of-way hiding-places of books and of monastic and cathedral libraries for manuscripts of the

precious literature. One enthusiastic collector, Niccolo Niccoli, left to the city of Florence a collection of eight hundred manuscripts, for which the de Medici
The Libraries. erected the first public library in Italy. Lorenzo de Medici twice sent an agent to Greece to buy up manuscripts. Pope Nicholas V., who was one of the most generous patrons of the New Learning, is said to have collected five thousand manuscripts. With these he founded the famous and valuable Vatican library.

The fiery enthusiasm of the New Learning could not be confined to Italy. It soon overleaped the Alps. Scholars hastened to the feet of the Greek teachers in Florence and Rome from all the transalpine countries, and Greek exiles sought refuge in transalpine centres of learning, introducing there their wonder-working literature. As early as 1470 there was a native Greek teach-
The New Learning in the Universities. ing the language and literature of his country at the University of Paris. Before the century closed Grocyn, Linacre, and John Colet, Oxford scholars, had studied Greek in Florence and introduced it into their university on their return to England. In a manner somewhat similar, it found its way into the universities of Germany and other countries. It almost seemed that the universities had been called into existence for the New Learning. Their lay spirit adapted them for its kindly reception. They took it up, they cherished it, they spread it. The New Learning, in turn, richly repaid them. It gave them a new character, new courses of study, new food for thought, new enthusiasm for study, and more students.

NEW LEARNING IN TEUTONIC COUNTRIES

In Italy the interest of the new movement remained centred in the classic literatures of pagan Greece and Rome, but in the Teutonic countries it assumed a different character. In these, from the beginning, the scholars who gained mastery of the Greek tongue welcomed it as a means of discovering new truth and beauty in the New Testament. When Colet returned from Italy to Oxford, he undertook a series of lectures on the epistles of St. Paul based on a study of the Greek originals. The new study, it became manifest, had wrought a change in his religious views. He rejected traditional dogmas and the mystical theology of the Middle Ages, and based his faith and teaching upon a natural interpretation of the simple Scriptural narrative.

This peculiar feature of the New Learning was specially prominent in Germany and the other Teutonic countries of the continent, and was there fateful of great events. Almost immediately the study of the Greek New Testament aroused an interest in Hebrew and the study of the Old Testament, and to many scholars the revived Bible study became a matter of far greater importance than the study of the ancient classics.

Much of this interest in Bible study is directly traceable to a religious order known as the Hieronymians, or Brethren of the Common Life. The order was founded in the fourteenth century by a Brethren of the Common Life. Hollander named Gerhard Groot. These Brethren undertook the work of giving religious instruction to poor children. They soon had flourishing institutions. Their

most famous representative for all time is Thomas à Kempis, the author of the *Imitatio Christi*.

The later leaders of the order laid great stress on the teaching of the Scriptures in the mother tongue, and so became diligent students of the Bible, translating portions of it for the benefit of their pupils. They also departed from the design of the founder of the order, in that they established liberal courses of study and awakened in their pupils great love of learning.

Their most famous school was at Deventer, Holland. Here was educated the first notable German humanist,

John Wessel, a man who aided in determining the character of the humanistic movement in his native land. It is claimed that he got his first knowledge of Greek from Greek monks at Cologne, where they had found asylum in a Dominican convent. From Cologne he went to Paris and Rome to perfect himself in humanistic learning. From Rome he returned to Paris, and spent sixteen years there as scholar and teacher. Early in the decade between 1470 and 1480 he became intimately acquainted with two young students at the university upon whom he exercised great influence. They were Rudolph Agricola and John Reuchlin, both destined to become leaders of humanism—another name for classic learning—in their native land. In his love for the study of the Bible Wessel had learned Hebrew as well as Greek, and the trend which he gave to their thoughts with respect to his favorite studies became apparent in the after-activity of his friends.

Agricola was born in 1443, near Groningen, Germany. It is claimed by some that he was for a time a student

under Thomas à Kempis. He pursued classical studies both at Paris and in Italy. He divided his whole after-life between studying and lecturing. He taught the Latin and Greek literatures at the universities of Heidelberg and Worms. He was an eloquent man, and his great reputation as a scholar gave him almost unbounded influence in Germany as a pioneer of the classical learning. True to the influence of Wessel, he took up and made some progress in the study of Hebrew.

Agricola.

Reuchlin was born at Pforzheim, in the Black Forest, in 1455. His father had a position connected with the Dominican convent located there, and from the monks Reuchlin imbibed his first love of letters. At the advice of Wessel he studied Greek at Paris and, afterwards, at Basel, where he also taught both Greek and Latin. He was a thorough student and a born teacher. At different periods in his life after leaving Basel he taught Latin and Greek and Greek and Hebrew at the universities of Ingolstadt and Tübingen. Besides this he taught and influenced a large number of humanistic students privately. He gave himself up to the New Learning unreservedly. He prepared a number of Greek books and a Latin lexicon; and as rapidly as new classic texts appeared in Italy he prepared editions of them for German students, sparing neither time nor money to promote his beloved studies. The rapid introduction of humanism into the German universities was mainly due to him and Agricola.

Reuchlin.

At different times he visited Rome. On one of these visits he entered the lecture-room of Argyropulus, a

Greek who was teaching his native literature. Argyropulus asked him from what country he hailed and whether he had commenced the study of Greek. Reuchlin answered that he was German and was not unacquainted with Greek. The teacher handed him a copy of Thucydides. Reuchlin translated a part of it into Latin with such accuracy and fluency that Argyropulus was astonished. "Our orphaned and exiled Greece," he exclaimed, "has already flown across the Alps."

During this stay in Rome Reuchlin also commenced the study of Hebrew. For the sake of the study of the Old Testament he pursued his Hebrew studies with great zeal. In 1506 he published *Rudimenta Hebraica*, a combined Hebrew grammar and lexicon, the first work of the kind prepared for modern Christian students. For his share in the reviving of this study that had been neglected for so many centuries he has been termed the "father of modern Hebrew study."

No account of the Revival of Learning could be complete without a recital of the part played in it by Erasmus. He was the greatest of all the humanists, one of the very few scholars to whom a monument has ever been erected anywhere in the world. No country can claim him as exclusively its own. He was born in Rotterdam in 1467, but early in life began to wander. For a time he resided in Paris, then in England, afterwards in Italy, passing back and forth, and finally settled in Basel, where he died in 1536. There is a wonderful charm in the story of this scholar's life, not unmingled with pathos because of the sadness

Early Life of
Erasmus.

of its beginning and the melancholy of its end. Having legal claim to no name, he was early left stranded by the death of his mother, who had cherished him with warm affection. But no man ever seems to have possessed more the power of winning beneficent friends.

He first attended the school of the Brethren of the Common Life at Deventer. He won the loving admiration of his teachers. One of the brethren on one occasion embraced him in his enthusiasm and told him that he would one day reach the highest pinnacle of learning. Agricola saw him at the age of twelve. Noticing the beauty of his writing, the shape of his head, and the clearness of his eye, he exclaimed, "Tu eris magnus," "Thou wilt be great."

Erasmus commenced the study of Greek at Paris. Nothing better indicates the temper of the young scholar, and at the same time the enthusiasm aroused by the New Learning wherever it went, than a statement in one of his letters. "I have given up my whole soul to Greek learning," he writes, "and as soon as I get Activity as a Scholar. any money I shall buy Greek books, and then I shall buy some clothes." From Paris he went to Oxford, and studied Greek there under Grocyn, being for a time intimately associated with Colet and the other humanists in England.

He did very little teaching, but he wrote with prodigious industry. Much of his writing was on educational topics. Besides helping to prepare grammars for the new grammar schools which the New Learning was calling into existence in England, he wrote books on all sorts of subjects, from the *Manner of Letter-Writing* and

Rules of Etiquette for the Young through all the phases of pedagogical theory.

He had keen sensibility combined with genial humor. This was constantly revealing itself in pleasant witticisms. "I long to visit Italy," he once said when too poor to go, "but it is not easy to fly without wings." Archbishop Warham once sent him a present of fifty angels. On receiving them he exclaimed, with a pleasant laugh, "I wish there were thirty legions of them." This genial disposition enlivened his writings and manifested itself in his educational ideals. He desired women to have the same advantages of learning as men. The lessons were to be adapted in length and difficulty to the ability of the child, and taught with such sympathy and tenderness that the child must love the teacher.

Perhaps more completely and thoroughly than any one else Erasmus set forth humanistic educational ideals.

Exponent of Humanistic Ideals. In his scheme of education everything was to be subordinated to the classics, in the mastery of which was supposed to lie the source of all scholarly culture. Mathematics received but slight attention, and all necessary historical knowledge, he thought, could be acquired by a hasty skimming over the subject. He advocated the study of geography, natural history, and agriculture; not, however, to prepare for the demands of practical life, but, as was the case also with history, to prepare for more thorough understanding and appreciation of allusions in classic literature to facts in these realms of knowledge. Because of the hold humanism had taken on the European mind, such ideals prevailed in the educational work of

several centuries, and have yielded but slowly to those of later times.

The most fruitful work of Erasmus, however, was his edition of the Greek New Testament. Although the work had serious defects, it marks the beginning of a new type of religious thought, of a new era in human history. The influence of Colet is apparent in the work. In the preparation of it Erasmus showed where the accepted Latin version departed from the Greek text, and his interpretation was based upon the text itself and not upon received dogma. His object was to lead people to the study of the living Christ as portrayed vividly in the gospels, so they might find in him the inspiration to noble living.

The Greek
Testament.

He wished that even the weakest woman might read the gospels and the epistles of Paul, and that they were translated into all languages. "I long for the day," he declared, "when the husbandman shall sing portions of them to himself as he follows the plough, when the weaver shall hum them to the time of his shuttle, when the traveller shall while away with their stories the weariness of his journey." In the fulfilment of the wish, not long deferred, was a radical transformation of Christendom, the dawning of a new intelligence, and the inspiration to many a sturdy blow for human liberty.

XV

THE REFORMATION AND PUBLIC EDUCATION

THE story of the Reformation belongs partly to the history of education, for the Reformation was rooted in the revival of learning and nurtured in the universities. Other conditions in the church occasioned it, but its positive energy was derived from the new study of the Bible involved in the Teutonic revival. All the leading reformers were humanists. When Zwingli became priest at Glarus, in Switzerland, he gathered about him a number of young Latin students; and when Martin Luther entered the Augustinian convent, he took with him the Latin authors he most admired. But the reformers were all humanists of the Teutonic type, subordinating their linguistic knowledge to the study of the Scriptures. In Luther's case the humanistic spirit was almost entirely swallowed up in enthusiasm for Scriptural study. Out of this study came the new conceptions of religion, morals, and the church that produced the Reformation.

Relation to
State
Education and
Elementary
Schools.

The relation of the Reformation to education was a double one. The religious revolution not only was the product of an educational movement, but it also created a new epoch in educational development. Prior to it the church controlled all schools with the exception of

burgher schools here and there and some of the universities in the beginning of their existence. Schools generally were designed with reference to secondary and higher instruction. They were open for such people as cared to avail themselves of them or were able to do so. The number of these was relatively small, for the large majority of people felt no need of education and took little interest in it.

Now the Reformation began a radical revolution both in school control and in the nature and extent of elementary instruction. It gave birth to the public school with its state support and supervision and its efforts to make intelligence universal. Through the translations of the Bible it also gave to the great body of the common people a remarkably effective incentive to learn, at least, to read. The interest in popular education then instituted has, for various reasons, increased to such an extent that it is to-day the dominant fact in education. To it, mainly, are due the modern achievements in the science of pedagogy and the unceasing effort to make teaching a fine art.

Most of the leading reformers were deeply interested in education. The reason for this is not far to seek. The logic of their religious theory and the force of circumstances compelled it. Their fundamental propositions were: (1) man is justified by his personal faith; (2) the source of this faith is in the truths proclaimed in the Bible.

Causes.

When they placed upon the individual so much of the responsibility of working out the problem of his character and salvation, and sought the basis of his faith in a

knowledge of Bible truth, they were forced to recognize more or less clearly the need of teaching the people sufficiently, at least, to enable them to read the sacred volume with intelligence.

But more than this, the reformers took authority in doctrine and discipline out of the exclusive possession of the hierarchy and placed its responsibilities upon the whole body of the church. This was an exaltation of the laity, a recognition of the universality of priesthood, and demanded an enlightened laity as well as an educated clergy.

Even if the reformers had failed to recognize the logic of the position they had assumed, startling events that ensued would of themselves have opened their eyes to the necessity for general and liberal education. Scarcely had the dissolution of the old church allegiance begun, when such a series of wild, fanatic outbursts of religious extravagances and excesses swept over Germany and Switzerland as threatened for a time to destroy the Reformation and subvert the civil order as well. Facts like these are more potent than logic.

It was very natural that the Swiss reformer, Zwingli, should be one of the very first to manifest an interest in education. He was himself a teacher, and, as a Swiss, he represented the most democratic type of Protestantism. In 1523 he wrote in Latin what, almost beyond a doubt, was the first Protestant treatise on education. Zwingli's Treatise. It was entitled *The Christian Education of Youth*. It was published in the Swiss dialect in the following year.

In this work he plainly indicates the principal trend

of Reformation thought by the prominence he gives to the Bible. He outlines a course in Scriptural study, so arranged, to speak in the spirit of the little book itself, as to cause the glorious news of the Gospel to dawn upon the mind joyously, and produce faith and peace and righteousness.

He advocated the study of objects in nature, regarding the beautiful structure of the world and the harmonious arrangement of its parts as revelations of the wisdom, skill, and loving providence of God. He proposed also the study of the classics and Hebrew, and with them the study of arithmetic, surveying, and music. He encouraged running, jumping, putting the shot, and wrestling as means of developing the body. Altogether it was a sensible course of study.

The great central figure of the educational revolution wrought by the Reformation was Dr. Martin Luther. He was a man of the people. He understood them, sympathized with them in their needs, and labored for them. By birth he belonged to the peasant class. He first saw the light at Eisleben, in 1483. His father had moved there to earn his livelihood as a miner. Soon after Martin's birth the family moved to Mansfeld. Here the father in the course of time erected a forge, and slowly worked his way from Martin Luther. poverty to somewhat easy circumstances and to some social prominence.

With the ambitious design of making a lawyer of him his father sent Luther away to school. Though at the time there was nothing unusual about it, there is a touching pathos in the story of his student life at Magdeburg

and Eisenach. Until taken up by the Cotta family he was obliged, because of his father's lack of means, to get his meals by begging or singing. The echoes of his songs in the streets have not died out of human life yet. That singing prepared him to become, years afterwards, Germany's teacher of popular hymns and to sing for it *Ein Feste Burg*, the *Marseillaise* of the Reformation.

He took his university degree at Erfurt, and then became a monk in the Augustinian convent located there. He was called from the convent to take a professorship in the university of Wittenberg. While occupying that position, in 1517, he nailed his ninety-five theses on the church door at Wittenberg, and thus assumed leadership of the Reformation in Germany.

Luther's translation of the Bible had immeasurable value as an educational factor. His German version of the New Testament was made from the Greek Testament of Erasmus. It appeared in 1524. The translation of all the Scriptures was published in 1534. This Bible of his fixed the literary standard of the German language, thus marking the beginning of modern High German, just as Wycliffe's translation and the *Canterbury Tales* of Chaucer mark the beginning of our modern English tongue. But it did more. Its effect upon the masses of the people is not easy to understand now; it was little short of the marvellous. The use of Latin had made all who were able to read a class separate from other men; the learned, a higher order of beings. When now the greatest and sweetest of all literatures was put into the language of the people, it came to thousands who had never read, and they sought to

master its pages with the passionate eagerness of a newly awakened appetite. In a few years nearly half a million copies were in circulation. "Even shoemakers, women, and ignorant people," said a writer hostile to the Reformation, "are eagerly reading the New Testament as the fountain of all truth, with such frequency that they know it by heart. They also carry it about in their pockets."

But Luther also wrought directly as an educational reformer. The first specific fact in the history of modern public education is a letter written by him in 1524. It was addressed to the magistrates and councillors of the German cities. In this letter he appealed to them to establish Christian schools for the people. He claimed that it was their duty to do it, and to support them out of the public treasury. "Every year," he said, "the cities expend so much upon arms, roads, bridges, and numberless other things that contribute to their temporal peace and prosperity; should they not much more contribute as much for the employment of teachers for the poor youth, so much in need of instruction."

Letter to the
German Cities.

He pleaded for the education of all children of a proper age, both boys and girls. The children of the poorer families that needed their services at home were to be kept at school but an hour or two a day. In a published sermon supplementing this letter he took the ground that if parents failed to send their children to school, it was not only the right but also the duty of the authorities to compel them to do so. In these conceptions of his are the germs of modern compulsory

education and of elementary education adapted rather to the immediate needs of the people than to the demands of the courses of study in the higher schools. For these elementary schools, too, Luther advised the employment of women as teachers.

In support of his plea for schools Luther clearly and vigorously set forth a number of arguments. The first was based on the moral value of education. He claimed

Luther's
Arguments. that neither reason nor Christian love could suffer any part of the population to grow up undisciplined, and thus become poison to other children and sources of destruction to the community.

The public school plan embodied in the letter included secondary schools with courses in Latin, Greek, Hebrew, history, and mathematics. In these schools students specially gifted were to be retained longer than the others in order that they might be fitted for teaching and the ministry.

His general argument for these secondary schools was the relation of education to prosperity. "A city's prosperity," he declared, "does not consist alone in the accumulation of treasure, in strong walls, beautiful houses, many weapons and equipments; but its greatest wealth, its health and power, does consist in this, that it have many learned, sensible, honest, and well-disciplined citizens. These, indeed, can gather treasures and all good things, preserve them, and properly use them."

His special and crowning argument was founded on the needs of religion. There were wanted, to keep this pure and effective, men thoroughly trained in the lan-

guages in order that they might be able to interpret the Scriptures correctly.

In this important letter there are many more things of interest to the student of pedagogy. Among the studies Luther naturally gave the first place to the Bible, especially to the New Testament, because of its relation to the development of Christian knowledge and character.

Pedagogical
Ideas.

He clearly recognized the nature of grammar, rhetoric, and logic as formal studies, and the delusion of regarding them as the source of practical knowledge and eloquence. He strongly advocated the study of things themselves as the means of securing the substance, for the proper treatment and expression of which the formal sciences must be mastered.

His views on the study of nature and the importance and character of gymnastic training were similar to those of Zwingli.

For two studies, history and music, he made special pleas in different papers on educational subjects. He esteemed history for its moral value. He regarded it as a series of moral lessons in the concrete, having the reality and force of life. "Laws, arts, good council, warning, threats, comfort, knowledge, and wisdom well out of history," he thought, "as out of a living fountain."

Of music, with the enthusiasm of a lover, he asserted that it is "one of the most beautiful and glorious gifts of God." He himself had used it as an instrument of tremendous power. He thought no one fitted to teach school who has not the power of song. He called it a mistress of discipline and good breeding, and, almost

like the Greeks of old, he looked upon it as a means of making people mild and gentle of spirit, orderly, and sensible.

It is interesting to note that when the Duke of Mansfeld, in response to Luther's appeal, determined to open schools for his people, he commissioned him to establish a primary and a secondary school in Eisleben, his native town. Thus he who had gone out a poor boy returned to shower blessings upon his townspeople. These schools served as models for many more that sprang up in the Protestant portions of Germany.

XVI

THE CLASSICAL SECONDARY SCHOOLS

AMONG the interesting events of the sixteenth century were the rise and multiplication of classical secondary schools. While the story of these new schools is closely interwoven with that of the religious struggles of the time, they owed their origin and character mainly to the Revival of Learning. This not only pushed aside the scholastic philosophy in the universities and gave them a new life with new courses of study, but it also reformed secondary instruction and gave it the vigor and freshness of renewed youth.

Origin.

A few years after John Colet's return from Italy he was appointed dean of St. Paul's Cathedral in London. In 1512 he established and endowed, in connection with the cathedral, a secondary, or grammar school, as institutions of the kind came to be known in England. He called to its head a capable teacher, William Lilly, an enthusiastic humanist. His injunction to Lilly was that he should exclude the scholastic logic and carefully cultivate a knowledge of the Greek and Latin literatures. Lilly was very willing to respond. He was an Oxford bachelor, and had gained a knowledge of Greek from Greek exiles on the island of Rhodes and from famous teachers in Italy.

In England.

With the new studies were introduced also new grading, new text-books, and new methods. Lilly himself

composed for his school a Latin grammar that held its place in England for many years, and Colet and Erasmus helped to give character to the books placed in the hands of the pupils.

The school of St. Paul's was a fruitful one. In imitation of it, older schools changed their courses of study, and many new schools like it were established. Greene, in his *History of the English People*, says that more grammar schools were founded in the latter part of the reign of Henry VIII. than in the three centuries that preceded. Of the secondary schools now famous in England, Eaton was founded in the fifteenth century, Rugby at the height of the new movement before the sixteenth century closed, and Harrow was opened early in the seventeenth, though its foundation had been provided long before.

In the Germanic countries, especially in Germany itself, the new secondary school movement was more vigorous, if possible, than in England. It took its life
In Germany. largely from the scholarship and burning zeal of Philip Melanchthon, the friend and associate of Martin Luther.

There were many interesting features in the life of Melanchthon, not the least of which was his refined and amiable disposition. His grandmother, with whom he lived after the death of his father, was Reuchlin's sister. Reuchlin took great interest in him and gave
Melanchthon's Early Life. him Latin and Greek books. One day in sport he put a little red doctor's hat upon the young scholar's head because of his brightness and diligence. It was Reuchlin, too, who gave him his Greek name,

Melanchthon, in place of his German name, Schwartzerd, meaning black earth.

When the young scholar had ripened in the universities, Reuchlin accounted him second in learning only to Erasmus, and secured for him the professorship of Greek in the University of Wittenberg, in 1518. In his affectionate farewell to his young protégé, he applied to him the Scriptural promise made to Abraham: "Get thee out of thy country, and from thy kindred, and from thy father's house, unto a land that I will show thee; and I will make of thee a great nation, and I will bless thee, and make thy name great; and thou shalt be a blessing."

In many ways the beautiful prophecy was fulfilled. The humanistic transformation of the German universities, commenced by scholars like Reuchlin and Agricola, was completed through the inspiring genius and earnestness of the new teacher at Wittenberg.

He took a fatherly interest in his students. There probably had been no teacher so popular since the days of Abelard. At times as many as two thousand students attended his lectures. He prepared annotated editions of classic authors, and wrote text-books on nearly all the subjects taught in his day, including one on physical science.

The courses of study for the new secondary schools, called gymnasia in Germany, were formed mainly under his influence; some directly in accordance with his advice. The most famous of the gymnasium rectors, with one marked exception, and a large number of the teachers, had been students of his at the university.

Melanchthon's influence upon the growing school work of his native land was increased through a new office to which he was called. He was appointed visitant of the churches and schools of Saxony. For the guidance of the teachers he drew up a plan for the organization and conduct of the schools. It was adopted by other states also. It is an interesting document because it so clearly reveals the pedagogical ideals and methods of that day.

The plan includes both primary and secondary studies. It lacks the fulness of detail and completeness of organization that characterize the schemes developed afterwards in the gymnasia by some of Melanchthon's former students. Its greatest defect is the neglect of the mother-tongue. The value of careful instruction in this had not yet dawned upon the minds of educators; even Luther himself failed to discover it.

The work is divided into three grades. In each of these the pupils were to be retained until they had fairly mastered its studies.

In the first grade, pupils were to study the *Handbook for Children*, containing the alphabet, the Lord's prayer, the creed, and prayers for special occasions. In addition, they were to be exercised in writing and singing, learn some simple Latin grammar lessons, and commit to memory a few Latin words every day. The *Handbook* resembled those used in older parish schools.

In the second grade, they were to study Æsop's fables, some writings of Erasmus, some of the epistles of St. Paul, make a grammatical study of Matthew's gospel, commit to memory a few psalms, and every day learn

by heart some pithy Latin sentence. They were also to be exercised in music.

In the third grade, music and grammar were to be continued; Vergil, Ovid, and Cicero read; versification, rhetoric, and logic studied; and the pupils trained in Latin conversation.

Strangely enough, Greek and mathematics were excluded.

The most highly organized of all the early German secondary schools was John Sturm's. A study of it is important, because it won recognition as a standard school not only in the Protestant countries of the continent, but in Great Britain as well, and exercised influence accordingly.

Sturm was born in Schleiden, Prussia, in 1507. He spent three years of his early life at a Hieronymian school, and afterwards studied and lectured at both Louvain and Paris. In religion he was a Calvinist, and was actively associated with the leaders of the Reformed confession. He was rector of the gymnasium at Strasburg from the time of its opening, in 1538, until 1583. He made it for many years the most famous secondary school in Europe. In 1578 several thousand students were in attendance. They came from all the different parts of Germany, from Portugal, Poland, Denmark, France, and England. Two hundred of them were of noble birth; and of these, twenty-four were counts and barons, three were princes. The fame of the school won for Strasburg the name of New Athens.

Sturm was an able statesman, and was in the employ of nearly all the rulers of Europe; but he was also a

John Sturm.

thorough-going schoolman. He wrought out his courses of study with great accuracy and fulness of detail, and with remarkable co-ordination of the parts.

When the organization of his gymnasium was completed, the course extended over ten years, and the school was divided into ten classes, a class for each year. The lowest class was called the tenth; and the highest, the first. Each class was subdivided into sections of ten, *decuriæ*, and the first pupil of each decury was its *decurio*, decurion in English.

Sturm clearly defined the aims of his school, and excellently subordinated the work to their attainment. The main objects were three,—piety, knowledge, and eloquence. The knowledge sought included the truths of the Christian religion and the Greek and Latin classics, together with the branches involved in their mastery. By the term eloquence he meant ability to write and speak, particularly the Latin tongue, with fluency, accuracy, and elegance. The German language was studied only incidentally, while learning to read in the first year, and afterwards in the translation exercises.

For the cultivation of piety there was religious instruction every Saturday and Sunday throughout the course.

The study of the catechism was continued through the first six years, the first three years in German and the last year in Latin. In the intervening years it was translated from German into Latin. From the sixth year till the end of the course the gospel lessons of the different Sundays were studied, and the epistles of St. Paul.

Music was also taught, and the singing of hymns.

In the Latin course, the study of grammar was distributed over five years, the first two of which were devoted to declensions and conjugations.

During the first four years the pupils were daily required to commit to memory lists of Latin words used to express the facts of every-day life, and to read books called *Neanisci*, prepared by Latin. Sturm himself. These books contained dialogues in which were used the vocabulary and idioms of daily life. The object of these exercises was to prepare the pupils to use Latin as nearly as possible as if it were their native tongue. The Latin course embraced, besides, the letters and orations of Cicero, the *Eclogues* and *Æneid* of Vergil, the odes and epistles of Horace, Sallust, and the plays of Terence and Plautus. The portions of these authors studied were all carefully selected with reference to the growing knowledge and skill of the pupils. In the fifth year they commenced to memorize vocabularies of things foreign to them, and to study versification and mythology. The latter was required, because they that year began to study Vergil and short poems selected for them.

The fifth-year students—that is, the sixth class—commenced the study of Greek. The whole Greek. course covered the reading of *Æsop's* fables, the New Testament, Pindar, Homer's *Iliad* and *Odyssey* and the orations of Demosthenes.

In the ninth and tenth years, the students themselves had to expound the authors studied.

In the latter part of the third year were commenced

exercises for the cultivation of style. At first these consisted in transposing the parts of good Latin phrases and constructing new ones. After that, themes based on their studies were frequently written, Latin verses translated into German were again translated back into Latin verse, Latin exercises were translated into Greek and Greek into Latin, poems were composed, and letters written.

Rhetoric and logic were studied the last two years. Arithmetic was taught, it seems, in the ninth year, and some astronomy and geometry in the tenth.

As already indicated, the parts of the course were carefully correlated. The grammar lessons, including figures of syntax, were followed by abundant and careful analysis of the literature read, and by exercises in construction, or style. The same is true of rhetoric. When the students studied logic, they were required to make logical analyses of the arguments in the orations of Cicero and Demosthenes. As soon as they were able to read Greek well, they read the gospel and epistle lessons in Greek. Their exercises in composition were based on their studies, and thus served as reviews.

One other striking feature of the course must not go unmentioned. When the pupils had studied a play in Latin or Greek, they were compelled to commit it to memory and to act it. It was Sturm's desire that in the last year there should be presented one play every week by the decuries in turn. The acting of Latin plays was also introduced into the schools of England, and became one of the sources of the English drama.

This course of Sturm's was the work of a master, but like the other great teachers of his time, he left it to men of a later day to recognize in a practical way the importance of the mother-tongue and to correlate the work of the school more closely otherwise with the demands of the life beyond its walls.

It is interesting to note how the great historic movements of different ages put their stamp upon the courses of study in Sturm's gymnasium. The catechetical study of both Sturm's and Melancthon's schools was a modified heritage of the first Christian schools. It had survived the vicissitudes of the intervening centuries. The grammar, logic, and rhetoric were derived from the later Roman schools through the medium of the monastic and cathedral schools. They were the venerable trivium. The Latin and Greek authors so enthusiastically studied were an enlargement of the trivial grammar course, and were the fruit of the Revival of Learning. The study of the gospels and the epistles of St. Paul were the contribution of the Reformation, and the singing of hymns received its new impetus from the same source because of the congregational singing which it re-created.

Origin of the
Courses of
Study.

XVII

EXTENSION OF EDUCATIONAL ACTIVITY

It was not alone in Saxony that there was a generous response to the appeal of Luther. Other states likewise undertook the establishment and supervision of schools, and quite a number of the large cities did the same. Among the most prominent of the latter were Hamburg, Nuremberg, Frankfort, Bremen, and Dantzic.

In these schools the Latin was the recognized language of learning, but the demands of the mother-tongue were of such a character that they could not be entirely ignored. The children spoke German naturally and were obliged, in the methods of teaching then in vogue, to learn Latin through the medium of the German. The schools also gave religious instruction in the lowest grades, and this was necessarily in the native language to make it intelligible. Accordingly pupils were taught to read both languages. In the school plan of Würtemberg first, it seems, purely German elementary schools were provided for. This was promulgated in 1559. The same plan also directed the opening of writing schools in several of the cities, apparently similar to the writing, or burgher, schools of an earlier time.

Attention to
the Mother-
Tongue.

Generally, however, the hope for the future of the

native languages was found in the parish schools of the peasant villages. It was not possible there to continue scholarship to the mastery of Latin, so Latin ordinarily was not attempted. The pupils were taught the catechism and singing, meeting once or twice a week for the purpose. Before the sixteenth century closed it was common to teach reading as well, and sometimes writing and arithmetic. The pastor was the teacher, or, more generally, the clerk, who thus was clerk, sexton, janitor, chorister, and pedagogue. The reading book other than the catechism was the New Testament. This also was the reading book of the growing German elementary schools in the larger towns.

The growth of interest in the use of the native language was fostered by a number of men, and books encouraging it appeared from time to time. In 1573 Albert Oelinger published a German grammar. Some time previous to this a French grammar had been published by the zealous reformer Pierre Ramus.

These features of the new educational activity in Germany extended themselves into the neighboring Teutonic countries.

The educational ferment intensified by the conditions attendant upon the Reformation extended to higher education. The universities of Edinburgh in Scotland, Leyden in Holland, Upsala in Sweden, were founded in the latter half of the sixteenth century, and a number more, Lutheran, Reformed, and Catholic, in Germany, Switzerland, and other countries.

The most charming treatise on educational theory belonging to this time is Roger Ascham's *The Scholemaster*.

The work is all the pleasanter to the modern reader because of the simplicity and quaintness of its style. Ascham became a master of arts in St. John's College, Cambridge, in 1537, and lectured there on Greek and mathematics. For a time he was the Greek tutor of the Princess Elizabeth.

With rare good sense he gathered up what seemed to him best in the methods of Plato, Aristotle, Cicero, Quintilian, and Sturm, and worked out a comprehensive theory of Latin teaching. He supplemented it with a theory of discipline that reveals the lovable spirit of the man, and was in striking and pleasing contrast with the rigors that then prevailed in the school-room. He pleaded, like Luther and Zwingli, for the physical training of young men. Riding, tilting, shooting, running, vaulting, wrestling, swimming, hunting, and tennis he deemed a necessary part of a gentleman's training.

After learning the parts of speech and their proper putting together, the pupils were to be exercised mainly in double translation and imitation. As was the custom also in the Jesuit schools, the teacher first translated the passage to be studied and familiarized the pupil with the translation by repeating it. He was to do the same with the analysis and parsing, requiring the pupil to repeat the work done. The pupil was then to write out the translation, without help, in a book kept for the purpose; and, after an interval of an hour or more, translate it back into Latin. This translation was to be placed side by side with the original Latin by the teacher and criticized by comparison.

Roger Ascham.
1515-1568.

His Latin
Method.

The imitation was to consist in exercises written in imitation of the style or matter of some master.

Ascham advised the supplementing of these translations and imitations with the writing of para-
 phrases, metaphrases, and epitomes of good
 selections, and by training in declamation.

Other
Exercises.

The pupils were to be taught with proper exercises not only the general meanings of words, but also their specific meanings in the passages studied, their synonyms, their opposites, the idiomatic phrases in which they occur, and the words expressing variations of the thought.

The rules of grammar were to be studied in connection with the analysis and parsing. The study of grammar was thus to be made practical, pleasant, and thorough.

XVIII

THE JESUITS

JUST as the Reformation called into existence an educational activity conforming in its general character to the fundamental ideas that gave life to the movement and to the circumstances of its development, so the Counter-Reformation gave rise to educational efforts peculiar to itself in energy, aims, and methods. The most prominent features of the Counter-Reformation were the organization and the labors of the Society of Jesus. The educational activity of the Counter-Reformation was assumed by this Society and by other religious orders which, in this respect at least, closely imitated it. The Society and its schools took their character from the personality of their founder, Ignatius Loyola.

Loyola was born on his father's estate in the Basque province, Spain, in 1491, eight years after Martin Luther, whose labors and their results he was destined to combat so vigorously. Early in life he chose for himself the profession of arms. In the siege of Pampe-
Loyola's Early Life. luna, when the French had battered a hole in the wall, Loyola heroically threw himself into the breach to keep the invaders out of the city. A ball shattered the rock by which he stood, striking also and breaking one of his legs, while a splinter of rock severely injured the other.

He was confined to bed a long time, only to find at the end that the limb had been imperfectly set. He determined to have it broken again and reset. The healing process was slower than before.

He whiled away the tedium of his confinement by reading romances, of which, in the ardor of his nature, he was very fond. At last the supply was exhausted and he read the *Lives of the Saints*, the only remaining literature to which he had access. It transformed the man. With the same chivalrous enthusiasm with which he had entered upon military life, he determined now to devote himself to the service of religion. As soon as he was able he proceeded to the monastery of Montserrat, and hanging up his arms there, he left the monastery coarsely clad and barefooted.

After serving the poor and the sick in the Manresa Hospital for a time, he made a pilgrimage to the Holy Land. He was discouraged by the authorities from engaging in mission work there and returned to Spain, entering the grammar class at Alcala at the age of thirty-three. His efforts to do unauthorized mission work while a student brought him into so many ^{Preparation for} ^{Work.} conflicts with the church authorities that he finally resorted to Paris to complete his studies. He there attached to himself six companions, the most famous of whom was Francis Xavier. In 1534 they took a solemn oath in church to renounce all their goods by a certain date and proceed to the Holy Land to do mission work. This was the beginning of the Society of Jesus, in all probability the most compactly organized body of men the world has ever known. Increased in numbers

the Society received its charter from the pope in 1540.

A war with the Turks prevented the intended mission work in Palestine, but Loyola found abundant opportunity to employ the Society in similar work in other countries, and especially in the work of the Counter-Reformation. In our own country some of the most heroic exploration and missionary effort among the Indians was performed by Jesuit priests. The most important work of the Society consisted in the establishment and conduct of schools.

It is well to study the organization of the Society, because the organization of its school work had all the general characteristics of the organization of the Society for other purposes. Everywhere was manifested the Organization of the Society. military training of its founder. Absolute obedience was required of all the members. A French Jesuit upon receiving an order to do mission work among the Iroquois in America after all the former missionaries had been killed, simply said, "Ibo, sed non redibo,"—"I will go, but I shall not return." He went and fulfilled his prophecy by being burned at the stake.

The head of the Order received the title of General. Within the limits of the constitution his will was absolute. The whole field of activity was divided into provinces, with a "Provincial" at the head. Every month the Provincial was required to make report of the character, conduct, and position of each member in his jurisdiction; and every quarter the superiors of houses, collegiate and others, did the same. All this is true, too,

of the Society as reorganized after its suppression in 1773. The thoroughness of organization of Sturm's individual school was characteristic of the Jesuit schools as a system, giving them wonderful effectiveness within the limits of their aims and methods.

The energy of the Jesuits was so great that one hundred and fifty years after the death of Loyola they had seven hundred and sixty-nine collegiate and university houses of education. In all these Growth of the Schools. institutions there were at the lowest estimate more than two hundred thousand students. The work of these Jesuit teachers was strictly confined by the constitution to secondary and higher instruction, the latter embracing courses in philosophy and theology.

The whole system of education both with respect to teaching and to the management of schools was carefully elaborated in the generalship of Aquaviva. After years of study, consultation, inquiry among teachers in the Order, investigation, and revision, a work was prepared covering the whole ground, and published in 1599. It is known as the *Ratio atque Institutio Studiorum Societatis Jesu*,—The Ratio Studiorum.—*The System and Code of Studies of the Society of Jesus*. It was developed along the lines laid down in the constitution of Loyola. It was revised about 1830 to adapt it to modern conditions. What is further said concerning Jesuit education presents it as it was prior to the suppression.

To the secondary course pupils were admitted when about fourteen, and they completed it in from five to seven years. It closely resembled The Secondary Course. Sturm's, and was divided into five grades as follows :

1. Lower Grammar.
2. Middle Grammar.
3. Upper Grammar.
4. Humanity.
5. Rhetoric.

One year was devoted to each grade except the last, which usually occupied two, sometimes three years. Greek was studied in all the grades. During the three years of grammar study such portions of literature were studied as might be within the comprehension of the pupils, mainly selections from Cicero in Latin and Æsop in Greek. To the classical authors studied in the advanced grades were added the works of Christian Greeks like St. Chrysostom and Gregory Nazianzen. The teachers were directed to distribute the elements of mathematics and instruction in history and geography through the course as they found it convenient. The work in these studies was not outlined in the *Ratio*.

The higher instruction included a course of two or three years in philosophy and another in theology, covering from four to six years.

The philosophical course included logic, ethics, psychology, mathematics, and what was then known of physical science.

The theological course included, in addition to theology, church history, canon law, Sacred Scripture, and Hebrew.

The classes of the classical course were divided into decuriæ as in Sturm's school, and the office of the decurion was made a responsible and honorable one.

When a pupil was admitted to a class, there was

selected for him a rival, who was expected to point out the mistakes of his exercises and debate with him the propositions he made. He performed the same office for his rival. For certain exercises, too, the class was divided into rival camps called respectively Rome and Carthage.

There were three main features in the Jesuit method of teaching,—the prelection, the repetition, and the disputation.

The method of the different forms of prelection was carefully detailed in the *Ratio*. The prelection of a Cicero lesson is here given to illustrate. First, the teacher sketched briefly the meaning of the passage. Secondly, he translated the passage The Prelection. literally, preserving the order of the words in the original. Thirdly, he gave the grammatical analysis. Fourthly, he explained the meanings of the separate words and figures of speech, giving equivalents, both in Latin and the vernacular. Fifthly, he dictated the more elegant forms of expression to be committed to memory and used in the written exercises of the students. Last of all, he repeated the translation once or twice.

For most of the classes there was added also another feature known as the erudition. The teacher added whatever of history, geography, or any other form of knowledge the passage might suggest, or which would explain or ornament it. It was mainly in this incidental way that history and geography were taught.

After the prelection, one or more of the pupils were called upon to reproduce all or parts of it. Rules or passages to be committed to memory were first recited

by the decurions to the teacher, and afterwards, in his presence, by the other pupils in the decuriæ to the decurions. There was also usually a short review at the beginning of the next lesson.

To insure thoroughness, one day of the week was devoted entirely to repetition; and, in the lower classes, the work of the second half of the year was a repetition of that of the first.

The work thus far outlined was for the pupil the merest form of memory work. Even the grammatical analysis, as stated, was a pure memory grind. But there was added to the ordinary review a repetition of a higher type. It consisted of different forms of disputation, and could be made an intellectual exercise of high order.

In the lower classes these were "concertations" between rivals or camps or selected champions, sometimes one pupil being pitted against many. The concertations were debates on points in grammar, rhetoric, poetry, or on the opinions of writers. There were umpires and judges appointed, and prizes were awarded to the victors.

The disputations of the students in the philosophical and theological courses were conducted with much formality at comparatively frequent intervals. To give them as much dignity and life as possible, professors and students of other classes were invited to be present. The professor in charge of the class kept the debate within limits, and saw that it came to a definite conclusion.

Students in the classical course whose scholarship entitled them to the honor, were elected members of voluntary associations for study called academies. The

voting power was vested in those already members. The exercises of the academies consisted of recitations, debates, and prelections, the last either original or repeated from the class-room. Academies.

Almost daily the classical students were required to write themes. These were either original Latin compositions, or translations of exercises dictated by the teacher. At the end of every year there were long and rigid examinations prepared for by careful reviews. Other Features
of the Work.

The lessons were short, and the work was made as pleasant as possible by the teachers. The aim was simple and definite, and the results sought were thoroughly accomplished. These were ability to use the Latin language with ease and elegance, and indoctrination in the philosophical and theological opinions accepted by the Order.

The discipline was made as mild as possible. Corporal punishment was seldom resorted to, and then turned over to a special official not a member of the Order.

In addition to the honors and prizes already mentioned, there were many other prizes for class standing and special achievements. These were intended for outside students. A careful review of the class work reveals the fact that one of the principal features of its life and management was a carefully devised system of emulation. Emulation was, indeed, carried to such extremes that, apparently, it must have obscured the true ends of study and cultivated improper feeling among the students. Emulation.

Much attention, naturally, was devoted to the religious training of the students. Every morning they were to hear mass, and every lesson was to begin with the sign of the cross or a prayer. The students were urged to confess and receive the Holy Communion frequently.

The teachers, of course, were members of the Order, except when courses in law or medicine were added.

Almost without exception, Jesuits who had completed the philosophic course were required to teach in the lower course for from four to six years before they commenced to study theology. To prepare for the teaching, they were required to take special reviews for a time and to give prelections for some months under proper supervision. This was the beginning of the history of special training for the art of teaching.

The professors of the higher courses were selected from among the graduates of eminent ability.

In general, the foregoing description of the methods of teaching and management apply to the Jesuit schools of to-day.

The Jesuit schools had several great advantages. The teaching body was thorough in its discipline and organization, it was well trained for the work, and the teaching was a matter of religious devotion. This, too, made the teaching cheap. Tuition, in fact, was gratuitous even to outside students; and, in case of poverty, board also was furnished them when funds were sufficient. Candidates for the Order were maintained free of cost.

XIX

INNOVATORS OF THE SIXTEENTH AND SEVENTEENTH CENTURIES

THE classical learning had scarcely established itself in the universities and new secondary schools when there arose strong men who severely criticised both its aims and its methods and demanded a different type of education. Their criticisms and demands received but little attention from teachers at first, but they increased in force and volume, and at length commenced a slow educational revolution.

One cause of this reaction is to be sought in one of the noblest results of the New Learning itself. In giving birth to the new literatures of Europe it prepared for its own overshadowing and loss of importance. These new literatures were so vigorous and modern, so tense with the new and exuberant life that stirred in the hearts and brains of men, that they not only won respect for themselves but also excited a proud enthusiasm. They gave form and dignity to our modern languages.

Causes.

Another reason for it was the long series of geographical discoveries beginning with the voyages of Columbus to the New World. Closely allied to these were the efforts at colonization and the new and rapidly increasing commercial and industrial activity. These events could not fail to turn the minds of men away from the themes

that had before engaged them. They gave new scope to human thoughts and ambitions.

One of the most potent causes of all lay in the scientific activity which had its foreshadowing in the work and discoveries of the Franciscan monk, Roger Bacon, in the thirteenth century. It had its real beginning in the sixteenth century, and in the seventeenth claimed a long list of intelligent and successful inventors and discoverers. In 1609 Galileo first turned a telescope to the heavens, and about the same time Kepler worked out the laws of planetary movements. Harvey discovered the circulation of the blood in 1616. In the middle of the century Guericke invented the air-pump; and sixteen years before its close Isaac Newton discovered the laws of gravitation.

It is very evident that the training admired by the devotees of the New Learning and prized by the philosophers who learned from Aristotle and by the physicians who followed Galen would not continue to suffice for the new writers, business men, inventors, and scientists.

Faint indications of the new ideas are to be found in the pedagogical writings of Zwingli and Luther; but there

is a stronger and more definite prophecy in the *Gargantua* of Rabelais, a contemporary of theirs. The *Gargantua* is a work of coarse humor, and abounds in satire aimed at monks, though Rabelais was brought up a monk, and at the scholastic learning. It champions, in places, the revived classic learning and anticipates many features of later education. It advocates a fair acquaintance with mathematics, history, and civil law; a study of nature by direct observation;

and an acquaintance with the arts and trades gained by visiting workshops.

The first positive voice raised in protest against the humanistic education prevailing at the time was a vigorous one. It was that of the brilliant French essayist Montaigne. He was not a school-Montaigne.
1533-1592. man, and wrought out no comprehensive scheme for organized school work. The actual working plan proposed by him was to remove the boy from the too tender solicitude of the parents and from the confinement and harsh discipline of the school-room, and place him under the guidance and training of a tutor. It was very much like that more fully developed by Rousseau about two centuries later, and involved the same fatal errors.

Montaigne, however, clearly saw the radical defects in the school work of his day, and as clearly stated them. He also, with considerable definiteness, laid down most of the lines along which the modern revolution in education has so slowly developed. Though he accomplished no great changes in the educational practice of his own time, his writings were extensively read, and his influence upon later reformers, especially upon Locke and Rousseau was very great.

Education consisted chiefly in forcing into the minds of the pupils what was frequently little more than the form of a body of literature accepted as a finality in style and substance, a sort of *ne plus ultra*.Criticism of the
Schools. "Teachers," Montaigne said, "are incessantly thundering into the ears of their pupils as if pouring into a funnel." "They undertake to give the same learning to a body of pupils differing widely in temperament and

capability. Thus only two or three out of a large number realize good results."

The learning acquired by the few, in his estimation, lacked life because it was a mere memory reproduction. It evidenced lack of assimilation. It failed to prepare pupils for the practical demands of life, and to develop in them sound judgment and manly independence, rendering them instead timid and slavish. It sacrificed many of their best interests to a language no longer in use among the body of the people.

The reforms proposed in Montaigne's pedagogical writings may be summed up as follows:

Proposed	1. Pupils should be taught first their
Reforms.	mother-tongue,—the language which they
	use with their neighbors and in the practical affairs of life.

2. They should be led to deal directly with things,—with such things as are adapted to their capacities and needs.

The study of things is technically known as realism, in contrast with humanism, the study of the classic languages and literatures.

3. They should be trained by exercise to the skilful practice of an art, and be led to the development of independent judgment.

4. They should study history to bring them into inspiring contact with the great men of all time.

5. They should learn language by use rather than by grammatical rule.

This proposition came out of his own experience. When a mere babe he was taken out of his mother's arms and placed in the care of a learned German who

knew no French. The German tutor and his assistants were allowed to use only Latin. Even the parents learned enough Latin to speak with the boy in that tongue, and he knew no other language until seven years of age. He spoke Latin so fluently and correctly that when placed at school even his learned teachers were timid in their use of the language with him. Judged, however, by the reforms which he advocated, he, no doubt, felt that too much had been sacrificed for his Latin.

Lessons, he claimed, should be practised rather than recited. It should be especially noticed whether the pupils manifest good judgment in their undertakings, kindness and justice in their actions, intelligence in their speech, fortitude in sickness, moderation in pleasure, and order in the arrangement of their affairs.

General
Propositions.

“It is not a soul,” he said, “not a body, which we educate, but a man. Soul and body must be trained together.” Using a figure borrowed from Cicero, he said they must be trained together like two horses hitched to the same pole. The body must be hardened to the endurance of sweat, cold, wind, and sun, and kept from softness in the matter of clothing, food, and drink. The muscles must be made strong as steel, and the body active by exercise in running, wrestling, riding, dancing, and fighting.

It remained for an Englishman to give to realism its greatest impetus and most definite direction. The man was Sir Francis Bacon. He had a large measure of that happy combination of the practical and the philo-

sophical in the temper of his mind which has characterized so many of his illustrious countrymen. Early in life he became impressed with the idea that Francis Bacon. 1561-1626. he was born to a great destiny,—the destiny of usefulness to humanity. At the age of sixteen he left Cambridge University, where he had studied three years, dissatisfied with the course and irreconcilably hostile to the Aristotelian philosophy.

Late in life, when he had with his venality made a sad wreck of an extended and prominent political career, he undertook to reconstruct the sciences. His object was to give to them the usefulness which they seemed to him to lack utterly. When modern science was in its infancy, he made himself the great apostle of observation, experiment, and induction. So extensively and deeply did he impress men of his own and after-time that he was until recently regarded as the father of inductive philosophy.

Bacon was a master of vigorous and graceful prose, and nearly everything he wrote was intended to form an integral part of a great work which he had planned, or in some measure supplement it. The work, Bacon's Instauratio. *Instauratio Magna*, was never completed. Two volumes of it, however, made him a powerful factor in education. These were *The Advancement of Learning* and the *Novum Organum*. In them are set forth most completely his philosophic theory, and it is his general theory that has been of most service. What he says directly of the work of the school is comparatively valueless.

He commanded men to investigate, experiment, and verify. He asked them to study nature closely in order

to learn the exact truth, and thus be enabled to make themselves more useful. He considered truth and utility ultimately the same. "Turn away," he exclaimed, "from the shallow springs of traditional natural science, and draw from the unfathomable and ever freshly flowing fountain of creation. Live in Nature with active senses; ponder it in your thoughts, and learn to comprehend it, for thus you will be able also to control it. Power increases with knowledge."

The character of Bacon's philosophy is perhaps best indicated in the first and third aphorisms of the *Novum Organum*.

1. "Man, the minister and interpreter of Nature, can act and understand in as far as he has, either in fact or in thought, observed the order of Nature :
Chief
 more he can neither know nor do."
Aphorisms.

3. "There are two ways of searching after and discovering truth,—the one, from sense and particulars, rises directly to the most general axioms (propositions), and, resting upon these principles and their unshaken truth, finds out intermediate axioms, and this is the method in use; but the other raises axioms from sense and particulars by a continued and gradual ascent, till at last it arrives at the most general axioms, which is the true way, but hitherto untried."

Bacon, indeed, proclaimed a defective philosophy. He failed to work out the method by which his great contemporaries, Galileo and Kepler, made
Bacon's
 their discoveries; but the spirit of his writ-
Usefulness.
 ings was in harmony with their labors. He, as they could not, caught the ear of the great body of intelligent

men, and became the chief agent of his time in accomplishing a revolution in human thought. If for no other reason, he would deserve a high place among famous men for this: that he helped in no slight degree to give character to the pedagogic activity of Comenius, the greatest educator of the seventeenth century.

The actual school workers followed close upon the heels of the philosophical essayists. Richard Mulcaster was the first of them. He was famous in his day because of the distinguished scholars he had prepared for the universities and because of his educational works. One of these was the *Elementarie*, a treatise on primary education. Though head-master of a Latin school, he advocated in it the careful teaching of the English tongue.

Richard
Mulcaster.
1580-1611.

He commences his advocacy of English with a somewhat timid apology, but the pride and enthusiasm of the Elizabethan era was in him and had to burst forth. "Why should not all of us write English?" he asks. "I do not think," he continues, "that any language is better able to utter all arguments either with more pith or greater plainness than our English tongue." He tells how it had been enriched by English chivalry, wars, and trade, and how it had been carried over sea and land by English enterprise and daring.

The first notable experiment, however, in educational revolution was made in Germany. The leader of it was a rather extraordinary man named Wolfgang Ratich.

Ratich came from Wilster in the north of Germany. He was thoroughly educated in preparation for the Lutheran ministry, but found himself unfitted for preaching

by some defect in speech, so he continued his university life. While at Amsterdam he elaborated a new scheme of education. For a time, like an edu-
 cational Columbus, he went from university

Ratich.
1571-1635.

to university and from court to court seeking moral and financial support for his plans. In 1612 he memorialized the Electoral Diet, and some of its princes appointed a committee of eminent scholars to investigate his system.

On the strength of their report Ratich was summoned to reform the schools of Augsburg. His work there failed; but his friends did not desert him, and he at last found an able patron in Prince Lewis of Anhalt-Köthen.

The timidity which appears in Mulcaster's advocacy of English in no way reveals itself in the
 propositions and claims of Ratich. Timidity

Ratich's
Claims.

was not one of his striking characteristics. He declared that with his method he could,—

1. Teach Hebrew, Greek, and Latin in at least half the time ordinarily required.

2. That he could teach the arts and sciences in German, French, or any other language.

3. That he would introduce and peacefully maintain uniformity in language, government, and religion.

The apparent impudence of these bombastic claims was the naïve impudence of an enthusiast carried away by a great idea whose limitations he could not measure.

The second proposition deserves some attention. At that time Latin stood between the sciences and the student. Science was taught from books, and the books were Latin. He who had not mastered Latin could not study the sciences. Ratich proposed to remove the

barrier, and, apparently, to teach the sciences themselves instead of definitions of them.

The claims of the man, unsupported by something better, would undoubtedly have failed to secure for him the endorsement of the learned committees that examined his plans. He had much more. His His
Fundamental
Principles. methods of teaching he asserted to be in conformity with certain principles which he had formulated. These won the committees, and they were an important contribution to the development of pedagogy. Some of them are still considered vital and fundamental, and, with proper limitations, more may be made very useful to the teacher. They mark the man as possessed of something closely akin to genius.

The most important of them are the following:

1. Everything must be done in the order of nature.
2. One thing at a time and often repeated.
3. Everything first in the mother-tongue.
4. Everything without compulsion.
5. Nothing to be learned by rote.
6. First the matter, then the rules and principles.
7. Everything through experience and investigation.

He with truth assumed that the mind has a certain order in which it comes to an understanding of things. When this is not observed in the order of teaching, compulsion is necessary, and the effort is injurious to the pupil. He demanded study first in the mother-tongue, because then the attention can be fixed upon the thing to be studied instead of on the language in which it is expressed. Learning by rote was the radical vice of all the old systems of teaching. The tendency among

teachers has always been to exalt the mere fact of knowing, and to assume that when a pupil can recite a definition he knows the thing. Most of his principles were equally sound within the scope of their application, but some of them were serious pedagogical blunders.

Possibly no educational experimenter ever had better opportunity to give his system a fair trial. Prince Lewis started him well. He gave him a printing-house equipped to prepare text-books in six different languages, so that his books might be properly adapted to his plans. He was furnished a corps of teachers pledged to secrecy. The school was opened, 1619, with four hundred and thirty pupils, the number of boys and girls being nearly equal. Everything promised well; but the experiment so auspiciously begun soon ended in disastrous failure, and poor Ratich was put to jail for promising more than he could accomplish. He was released only after publishing a confession of this.

Ratich's
School.

The study of the school is interesting and profitable even in its failure. It collapsed because of three things. In the first place, Ratich lacked tact. The people were Reformed, and he was a radical Lutheran. As is the case with many more, his plan for establishing religious uniformity was to get all people to agree with him. In this instance there were too many other people. Secondly, the teaching strictly applied such fallacious principles as one thing at a time and often repeated. The pupils repeated many things to death. Last of all, Ratich sadly misapplied his correct principles, radically violating every one of them.

There were six grades. In the first three only the

mother-tongue was used and taught. Latin was taken up in the fourth, and Greek in the sixth. Besides the language teaching, there was religious instruction, and training in arithmetic and singing.

The Grades.

The teacher of the first grade was to form the language of the pupils by means of conversation exercises and the repetition of selected Scriptural passages. To prepare for the reading lessons, the pupils were taught the alphabet. The resemblance of the shapes of the letters to familiar forms was pointed out when the teacher printed the letters on the board. The children were required to copy them. All this tended to fix the forms rapidly and definitely on the mind. It showed that Ratich had at least some of the true teaching instinct. After the alphabet was learned, the teacher formed syllables, pronouncing them as he wrote them.

The first reading book was Genesis. The teacher first read the whole book to the pupils. He read each chapter twice over in immediate succession. As he read, the pupils followed in their books with eyes and fingers. After the whole book had thus been read by the teacher, he again read the first chapter. Immediately after, the pupils read it, each taking about four lines. When they stuck, he gave them the correct pronunciation.

They used the same book in the study of grammar. The teacher first selected a lesson in the grammar text, read and explained it to the pupils. Then they read it. After that the teacher took a portion of Genesis and read until he came to a word or phrase to which the grammar lesson applied. He stopped and showed all the

Reading and
Grammar.

applications and gave the declensions and conjugations. The reading and applications were afterwards repeated by the pupils.

The first book in Latin was not a grammar. It was not even a Latin book, but a translation of Terence. This was read over several times. Then the teacher translated the play word for word, repeating each half-hour's reading. The next time over, the teacher read and translated one-half hour and the pupils repeated the exercise the next. So they worked on to the end of the play. Then the pupils began in the beginning and read and translated the play themselves, the teacher only correcting.

Latin
Teaching.

The method of teaching Latin grammar was the same as for the German. After the pupils had read Terence, they and the teacher read the lessons in the Latin grammar and applied them to Terence. It is clear that this experimenter came near to discovering a sensible method of teaching grammar.

Ratch no doubt thought that by taking the pupils over the course indicated above they would naturally catch the spirit of the work and learn enough elements to enable them to become skilful in reading, grammar, and Latin, and that the principles he had formulated would thus be realized. He failed to see that the long-continued series of recitations by the teachers to the silent and watchful pupils was for the latter a very unnatural proceeding and tended to smother all the spirit of investigation that might be in them. The work thus violated whatever was sound in his principles. Aside from a few features in the reading and

Criticism.

grammar exercises, it was a long-drawn duplicate of what was done in schools generally,—the teacher worked out the lessons and the pupils remembered what they could of the teacher's recitations. The other schools had the advantage in that the teacher's recitation periods in them were shorter and the pupil's repetitions more frequent.

After the failure of the Köthen experiment, Oxenstiern, the great Swedish minister, sought an interview with Ratich in the hope of employing him to reform the school work of Sweden. As Oxenstiern afterwards told Comenius, Ratich answered his questions by placing in his hands a quarto volume containing an account of his methods. The minister was convinced of their impracticable character and refused to adopt them. Ratich never again got an opportunity to repeat his experiment, and died in 1635, a disappointed man.

Among the men of the seventeenth century active in educational reform, the figure of Comenius towers pre-eminent. He was born in Comna, Moravia, in 1591.

John Amos
Comenius.
1591-1671.

The sixteenth century contributed much to the uplift of humanity, and it almost seemed as if the spirit of all that was most exalted in it had entered the soul of Comenius at his birth to be carried by him into the next. Yet the story of his life is a sad one, and its pathos is all the greater because the deepest of his sorrows were the sorrows of his whole people.

Comenius was left an orphan early in life. His education was sadly neglected until he was well grown. He

belonged to a religious organization known as the Moravian, or Bohemian, Brethren. At the age of twenty-four he was ordained a minister in it. He had scarcely been settled in a pastorate at Fulneck with his young wife and a little child when a vigorous effort was made to suppress the Brethren. The Spaniards plundered Fulneck in 1621. Comenius lost his whole library and nearly everything else he possessed. Soon after, he was bereft of wife and child.

For a time he found refuge from the religious persecution in the mountains of Bohemia. In 1628 there was issued a decree that all people who did not confess the Catholic faith must leave the country. In the midst of a severe winter thirty thousand families left Bohemia. With many other exiles he then sought refuge in Poland. He made his home in Lissa, and here, when he was an old man, another great misfortune came upon him. The Brethren had incurred the anger of the Poles, and the latter burned the city. In the conflagration Comenius lost his whole library again and nearly all his manuscripts. The loss of the latter well-nigh broke his heart, for in the course of his busy life he had written more than a hundred works.

At Lissa, Comenius was elected bishop of his church. He continued in the office until the day of his death. In fact, he was the last bishop of the old brotherhood. When he passed away, most of its scattered members connected themselves with Reformed and Lutheran churches. It was not, however, as minister or bishop that he did his greatest work, it was as teacher and writer of pedagogical works. Before

Offices and
Labors.

he entered the ministry he had taught at Preirau, in Moravia. He also taught at Fulneck and in the gymnasium at Lissa. For a number of years he was rector of the gymnasium.

However much his education had been neglected early in life, he made up for it in later years with his untiring industry. He made himself familiar with all the pedagogical theories of his own and ancient times, and put himself in touch by correspondence and otherwise with the progressive educators of his day. He was most deeply influenced by the work of Ratich, Bacon, and a Spanish educator named Vives. When, after a time, he began to write on educational subjects, he had back of what he said considerable practical experience and a full knowledge of what had been said and done by others.

He was the first man to write a treatise that covered the whole field of education in a scientific manner and was imbued with a genuine modern spirit. For the intelligent reader of to-day almost every page has some surprise because of the way in which it presents and discusses questions that now occupy the attention of educators as being vital and revolutionary.

Comenius called his great work *Didactica Magna*. In a letter to a friend he tells why he chose the title. His explanation shows plainly the broad difference between the aims of modern education and those which characterized the educational activity of the Middle Ages and the Renaissance. "For I had undertaken," he says, "not a didactic of painting or drawing, nor of grammar, logic, or any other part of

*The Didactica
Magna.*

learning, but of life, and for this reason I called it the great didactic."

Many parts of the book now sound strange. It begins with a benediction for all who are responsible for the proper rearing of children. The treatise has its setting in a theological discussion of the moral and intellectual condition of man, his relation to lower existences, to his fellow-men, to eternity, and to God. This is the logical basis of the work, which takes many of its noblest features, too, from the special religious faith which Comenius professed.

The technical name of the Moravian organization was "Unitas Fratrum,"—Unity of the Brethren. The revived church for a time formed communal societies.

In the old Moravian cemeteries in America Unity of the
Brethren. men, women, and children, white and Indian, are buried side by side with reference to sex and maturity, but irrespective of family, wealth, or social position. The tombstones are all alike, except in size, and are laid flat on the graves so one cannot tower above the others or vie with them in ornamentation because of family pride. Side by side, one great family, they await the resurrection day, preaching in the solemn, simple unity of their burial the doctrine which they had learned from the Great Teacher, the brotherhood of the race.

In this Unitas Fratrum lies the key to what belongs very particularly to Comenius in his theory of elementary education. According to it, all children, Theory of
Elementary
Education. girls and boys, poor and rich, are to attend the elementary school, working out the problems of school life together and receiving the same

training for the future. "I desire," he said, "a general culture for all who are born human beings unto everything that is human. They must, therefore, be educated together, as far as this is possible, in order that they may mutually inspire, animate, and stimulate one another. I intend that they be educated to all virtues, especially to moderation, harmony, and willingness to perform mutual service. They must, therefore, not be separated too early, and the opportunity must not be given to a certain number to regard themselves with complacency and others with contempt." In Europe, where the popular elementary schools are separated from the secondary schools along social lines, this ideal has not yet been realized. That has been done in America alone, and, in the best portions of the country, in a grander way than Comenius himself could anticipate.

Comenius regarded educational activity as ending with the twenty-fourth year. He divided this time into four periods of six years each. The first period Educational Periods. he assigned to the mother school; the second, to the elementary school, mother-tongue school he called it; the third, to the Latin school, or gymnasium; and the fourth, to the university.

The mother school was the home school. Under the special care of the mother the children were to learn the correct use of their language, the free and accurate use of the senses, the elements of religion, and correct morals. The mother was thus to lay the foundation for all the future knowledge and development of the children.

The course of the elementary school outlined in the *Didactica* included reading and writing the mother-

tongue, drawing, arithmetic, including practical measurements, the catechism, singing, civil government, history, and geography.

The gymnasial course embraced grammar, arithmetic, geometry, astronomy, physics, geography, music, rhetoric, logic, and ethics.

The university was to offer special advanced courses in all departments of learning.

He almost exactly anticipated the present elementary and secondary courses of the public schools in the United States.

The general aims of these courses of training and instruction are set forth in the author's noble definition of a school. "I call that a school perfectly fulfilling its mission which is a place for the building up of a genuine manhood, where the spirit of the learner is baptized into the glory of knowledge and wisdom, quick to understand all things secret and revealed, where the emotions of the soul are brought into full harmony with all the virtues, the heart so won by the love of God and filled with it, that it is possible for all who are intrusted to the school to be led into true wisdom, to become accustomed even here on earth to lead a heaven-like life." In his own analysis, the pupil is to become intelligent, moral, and pious, and these qualities are to have their setting in a body rendered healthy and vigorous by all approved forms of physical training. The intelligence is to be developed by teaching the pupil to know himself and all things in his environment necessary to a useful life.

General Aims
of Education.

Comenius adopted Ratich's proposition, "Everything

in the order of Nature," but with far deeper insight into its meaning. The study and other work of the school, the *Didactica* teaches, is to be made pleasant. The pupils are to learn nothing and do nothing which is not demanded by their native powers and possibilities and in conformity with the practical requirements of their environment. All is to be carefully graded in harmony with the progressive steps in their development. Besides this careful correlation of work with the unfolding powers of life, all the different elements of school work are to be properly correlated with one another, so that things which belong together are studied together.

Instruction is to proceed from the general to the particular, from the easy to the difficult. As nearly as possible, understanding is to condition what shall be committed to memory. That only is to be taught which prepares for the best use of life.

The work of the school is to be fundamentally realistic and, in a broad sense, practical. "People must be taught to get their knowledge, as far as possible, not from books, but from earth and sky, from oaks and beeches." When it is not possible to study the things themselves, then the most realistic representations are to be employed, as skeletons, models of muscles and vital organs in physiology, and pictures in many studies. In the elementary course no foreign tongue is to be allowed to interfere with the attainment of that sense knowledge which is the basis of all true knowing.

The principle of correlation is to be applied to forms

of expression. Whatsoever the pupil learns that shall he also express. The mouth and the hand are to be trained to keep pace with the understanding. The word and the thing are to be bound together. Written exercises are to be numerous, and express the pupil's growing knowledge. All training in style is to be connected with the effort to express what is learned.

Theory of
Expression.

When foreign languages like Latin are studied, they are to be learned by reading and use, rather than by grammatical rule. The language learning is to keep step with the growth of intelligence and the knowledge of things.

Practical arts are to be learned by doing, as singing by singing, writing by writing. The learner must be trained to the right use of the material employed, must be skilfully guided, and have abundant practice. Rules are to be subordinated to examples, and are to guide practice. They must be few, short, and clear, and necessary to the direction of the work.

Comenius, as Pestalozzi also did after him, applied this principle to religious and moral training. He, of course, advised the teaching of principles and rules, but thought the main dependence is to be placed on kind and tactful guidance to moral conduct. Piety is to be developed by teaching the Bible, the visible works of God as the revelation of his glory, and by habituating children to prayer and self-measurement.

The *Didactica* supplements the theory of teaching with an intelligent and sympathetic analysis of the principles and methods of discipline in harmony with the rest of the work.

The weakest part of the educational theory presented in the *Didactica* is the exaggerated value set upon knowing all things. It recurs every now and then. The Pansophic Scheme. Comenius thought that a man's development completes itself in a knowledge of the essentials of all forms of existence and of every human occupation. In accord with this thought, he planned a scheme for the publication of a work summing up in itself the whole range of knowledge. To make the work possible, he desired to secure the founding of an institution in which all departments of knowledge might be taught and worked up, and thus prepared for publication.

This pansophic, all-knowledge, scheme brought him into touch with a man in England named Hartlib, a friend of John Milton's. He, with a number of others, had a similar scheme. It had been suggested to them, possibly also to Comenius, by Bacon's *New Atlantis*. For a time they entertained hopes that Parliament would furnish the money to establish such an institution. Comenius was to be its head. He was summoned to appear before Parliament and present the details of the scheme, but trouble in Scotland and a war with Ireland diverted the attention of Parliament, and the scheme failed.

The great reputation of Comenius during his life, and possibly his greatest usefulness, was due neither to the *Didactica* nor to the pansophic scheme. It arose from the text-books which he wrote in harmony with his theories.

The first of these text-books to attract special attention was the *Janua Linguarum Reserata*,—"The Gate of

Tongues Unlocked." It was published while he was teaching at Lissa and before the *Didactica* had appeared. It immediately made him more famous than perhaps any other teacher has ever been made by a single text-book. The *Janua* was suggested to him by the work of an Irish Jesuit named Batty, who had written short treatises introducing all the words of the Latin language. In adopting the suggestion, Comenius was influenced by three of his own leading ideas: the idea of teaching men all things, of adapting the language to the understanding, and of turning the attention to the things themselves. He described in the book all forms of occupations, and set forth the elements of all the sciences in Latin and German side by side. The statements were made very simple in the beginning, more difficult towards the end. The treatises were arranged under one hundred heads, and contained eight thousand words used in a thousand sentences. It had the serious mistake of using each word only once.

The book was soon translated into ten or a dozen European languages, and into Turkish and Arabic besides.

It was largely the reputation produced by this book that caused Comenius to be called to England. It also brought him an invitation from Oxenstiern to reform the school work of Sweden. That was the position for which Ratich had been considered. Comenius undertook the commission. During its prosecution, a period of four years, he resided at Elbing, Prussia, under the patronage of a wealthy and generous Dutch merchant named De Geer. The principal fruit of his labor was the *Latest Method of Teaching Language*.

In 1650 he accepted a commission to reform the schools of Transylvania. He took up his residence at Patak, where he established schools. He remained there four years. In this time, among many works, he produced his greatest and most useful text-book, the *Orbis Pictus*,—"The World Illustrated." It was an improved edition of the *Janua*, with the addition of pictures to illustrate the text. Everything in the pictures that was named in the Latin and vernacular texts had a number attached to it which was also attached to the proper words in the texts. Thus the pictures served to explain the text. This was the first illustrated school-book ever published, the forerunner of all the beautifully illustrated readers and other school-books of to-day. It was a decided step forward in realism. The book had an enormous circulation. The *Didactica* marked a revolution in educational theory; this wrought a revolution in educational practice.

After Lissa was plundered by the Poles, in 1665, Comenius wandered for some months in Germany. He was offered an asylum in Amsterdam by Laurence De Geer, the son of his former patron. There his life came to a peaceful end in 1671. In his seventy-seventh year he wrote his last work, his confession. In this occur these beautiful words, which enable us to look into the man's innermost soul: "To Christ, my eternal love, I give unending thanks, because he has placed such love for his lambs in my heart and so blessed me that I could accomplish for them what I have. I hope and confidently expect from my God that

The
Orbis Pictus.
Last Days of
Comenius.

my reforms will be realized when the winter of the Church is past, the rains have ceased, and the flowers blossom forth in the land."

Contemporaneous with Comenius, John Milton, the author of *Paradise Lost*, placed himself on the side of the innovators. His experience as an ambitious and industrious student and private tutor together with his zeal in the cause of humanity gave him deep interest in education. He expressed his views on the subject in a tractate on education addressed to Samuel Hartlib, the friend of Comenius.

He adopted four propositions as fundamental,—Education must be realistic; Language must be taught as a means of expression; Intellectual effort must be made pleasant by grading work in harmony with the pupil's developing powers; There must be thorough physical training.

His views are the more interesting from the fact that he was one of the most accomplished classical scholars of his time.

In attempted accord with his principles he outlined a course of studies. It was as ponderous as his genius, and largely impossible. He himself said of it that "it was not a bow for every man to shoot in that counts himself a teacher." A number of the methods he proposed were equally impracticable for a school.

Milton's tractate seems to have had little practical influence, but the case was different with his distinguished countryman, John Locke. His work is interesting if for no other reason than that he, with Montaigne, did much to mould the ideas of Rousseau.

Locke had special preparation for the educational work which he wrote. He was educated for the profession of medicine, chiefly with reference to his own health, which was feeble. He also made a particular study of the limitations and capabilities of the mind, the results of which he published in *An Essay on the Human Understanding*. He was for a time tutor to the son of the Earl of Shaftesbury, and to his son after him. The influence of all these experiences can be traced in his pedagogical treatise entitled *Some Thoughts concerning Education*. He undoubtedly owed much, too, to Montaigne. His general theory is in close accord with Montaigne's, and many passages in his work bear close resemblance to passages in the essays of the French author.

A person turning from the perusal of the *Didactica* of Comenius to the *Thoughts on Education* is at once struck by the different temper of the latter. Comenius looked upon education as a means for uplifting the race, and the *Didactica* was written in a broadly humane spirit. Locke was a gentleman, in the sense in which the term is used in England. His intercourse and sympathies were with upper-class Englishmen, though he was a liberal-minded man. He wrote only concerning the training of a young English gentleman for his accepted position in life, and in a dispassionate and practical way.

"A sound mind in a sound body is a short but full description of a happy state in this world," is the first sentence in Locke's book. It is the key to the whole work. It begins with a comprehensive series of

suggestions for the preservation of health. Rules are laid down with respect to food, drink, clothing, rest, and medicine. Plain food is to be used in moderate quantities, and strong drink very seldom or never. Locke zealously advocated a hardening process, rather light clothing in winter, and thin, leaky shoes, a process that would be very apt to harden many out of existence.

Locke's
Health Rules.

There is almost nothing in his scheme for intellectual training that distinguishes him from the other innovators. Pupils are to be taught to know things and to learn the mother-tongue first. Only those whose social position demands it are to learn Latin, and even gentlemen are to learn French before Latin, because of its greater usefulness.

Intellectual
Training.

Grammar is not to be studied until the pupil has some use of the language, and English grammar is to receive special attention, because it is a greater disgrace to use the native language incorrectly than to blunder in a foreign tongue.

Some pains should be taken to teach drawing, to enable men to tell what they have seen readily by means of pictures, as it is sometimes possible to tell in that way more plainly and definitely than by means of words. For this reason drawing is specially serviceable for a gentleman when he travels. He is also to be taught law.

Study is to be made as nearly like play as possible. The teacher is to observe the pupil closely in order to discover the periods of special aptitudes and inclinations, so that he may adapt the exercises to them. To make the learning of reading pleasant,

Study as Play

he devised games with blocks of wood having letters on them.

Locke makes the cultivation of morals and manners of primary importance. All learning is to be subordinate to virtue and good manners. The largest part of his book is devoted to the subject. Careful rules are laid down concerning the crying, whining, fears, stubbornness, cruelty, and lying of children, and the cultivation of self-denial, courage, good nature, and politeness. The discipline is to be tactful and mild, and appeal to the mind with its rewards and punishments rather than to the body. The result of it should be the development of a fine sense of honor.

Partly for the sake of his manners and partly for the sake of strength and dexterity, the young gentleman is to be carefully trained in dancing, music, wrestling, and fencing. To this Locke made what was for that time a rather remarkable addition. It is that the young man learn gardening and at least one manual trade as a means of pleasant recreation and a safeguard against useless and dangerous pastimes.

The statement with respect to trades suggests another of Locke's contributions to educational history. When he was commissioner of "Trade and Plantations" he proposed a plan for working-schools for pauper children over three years old. The objects of the plan were to relieve the parish of the burden of maintaining the children by giving it the benefit of their labor, to relieve the mother at home, and to accustom the children to work.

Locke's own teaching experience was that of a tutor, and he naturally fell into Montaigne's blunder of regarding private education as superior to that of the schools. In other words, he believed in trying to make students out of boys by removing them from the helpful and inspiring companionship of fellow-students, and to develop morals and manners by removing them from a large field for their proper exercise.

Tutoring.

Another great man, a Frenchman, deserves a high place in the list of the educational reformers of the seventeenth century. It is François Fenelon.

Fenelon was born in the province of Perigord in 1651. He was ordained a priest at twenty-four. At the time of his death he was archbishop of Cambray.

He was one of the few men great in history who can be termed lovable without at the same time implying some want of strength and dignity. He was a very learned man, a fluent and charming writer, one of the classical authors of France. He was a born teacher, inflexible in principle and purpose, and possessed of wonderful tact and sweetness of temper.

François
Fenelon.
1651-1715.

Most of his work as a teacher was connected with the efforts to make the Catholic religion universal in France. These efforts culminated in the revocation of the Edict of Nantes in 1685. His first experience as a teacher he gained as superior of the convent of the New Catholics. This was an institution for the retention and education of female converts from the Protestant faith.

While connected with the convent of the New Catholics Fenelon wrote a treatise on the *Education of Girls*. It is still regarded a classic in French pedagogical literature.

It is very interesting both because of its general pedagogical views and because it presents the opinions on female education of a man who, on this subject, was far in advance of his time. It thus indirectly reveals the educational standing of the comparatively few women of that day who received any instruction beyond the requirements for admission to church membership and the training for household duties.

Theory of
Female
Education.

He accepted the proposition that women are intellectually weaker than men. He argued that for this very reason they should be educated in order to strengthen their intelligence. He pleaded that they be trained to perform well their duties in life, duties that constitute the foundations of all human life. "They have the principal part in the good or bad morals of almost the whole world. A judicious, diligent, and pious woman is the soul of a household; she establishes order in it for temporal prosperity and salvation."

He considered female education necessary, too, to keep girls from falling into objectionable habits and developing a discontented disposition because of idleness. If they are bright, he thought, they are apt to read books that nourish vanity, and romances that develop unwholesome and extravagant ideas of things, and morbid sentimentality.

He asked that girls be taught to read and write correctly, and that they also learn grammar, that they be instructed in ancient and modern history, and be given a course in good literature, both prose and poetic, ancient and modern.

The methods which he advocated are applicable to both girls and boys. Some of his realism sounds very much like that of Comenius. He advises that teachers take advantage of the curiosity of children.

If they desire to see a mill or a shop, they should be taken there and shown how the work is done. In this way they can be taught how are made the things that serve human needs.

Fenelon's
Methods.

Instruction is to be indirect as far as possible, because it and all the activity of the pupils is to be highly pleasurable to them. In harmony with this thought he gave great prominence to history and fables as means for moral instruction.

From 1689 to 1695 Fenelon was the preceptor of the Duke of Burgundy, grandson of Louis XIV. The young man was a "born terror." He would fly into wild fits of passion at the rain if it interfered with his sports. Because of his firmness of purpose, his tact, amiability, and skill in teaching, Fenelon was remarkably successful in managing the young man and moulding his character.

In pursuance of his theory of indirect teaching, he composed fables, dialogues, and stories to teach his royal pupil morals and history and develop in him broad and generous views of life and the duties of rulers. The most famous of these are the *Collection of Fables*, the *Dialogues of the Dead*, and the *Telemaque*. In the *Dialogues* famous historical characters appear and converse. The *Telemaque* was taken from Homer. In it the author presented such liberal views with respect to the organization of society that,

Teaching
with Stories.

when a treacherous publication of the book brought it to the notice of the king, he interpreted it as a satire upon his government and became irreconcilably displeased. With his books Fenelon not only permanently enriched French literature, but he also led the way in modern *story methods of teaching*.

XX

PROGRESS OF THE SCHOOLS IN THE SEVENTEENTH CENTURY

IN the seventeenth century no other country in the world developed educational facilities for the masses of the people with such rapidity and enthusiasm as Holland. Germany might have kept pace with her if she had not suffered from the devastation of the Thirty Years' War, but that terrible struggle left her seriously crippled. Holland had excellent preparation for the new school spirit aroused by the Reformation. In the thirteenth and fourteenth centuries she was justly famous for the size and number of her burgher schools, and the memory of the schools of the Brethren of the Common Life still had an inspiring influence.

In Holland.

As early as 1582 the Estates of Friesland decreed that the inhabitants of towns and villages should provide good and able Reformed schoolmasters. John of Nassau, brother of William the Silent, wrote to his son, the Stadtholder of Friesland, urging him to establish free schools in which the rich and the poor might be educated very cheaply.

The schools then established and supported in whole or in part at the public expense were in the nature of the German parish schools already described. The teacher acted also as clerk of the church, bell-ringer, grave-digger, and choir-master. The teaching was often

poor enough. Early in the seventeenth century there were already so many of these schools established that, it is claimed, it was almost impossible to find a person in Holland, even in the country, unable to read and write, provided he was old enough for such accomplishments. It is supposed by many that the public school interest manifested by the early New England settlers was acquired by them during their sojourn among the Hollanders.

The seventeenth century saw the beginning of educational activity in America, and citizens of the great Republic may now look back with pride to the beginnings, simple enough it may be, yet rich with promise for the future. The northern colonies, from the beginning, committed themselves to a local public school system.

The first public school in this country was opened in New Amsterdam in 1633. It was supported, at least in part, by a special tax. Its first teacher was Adam Roelanstan. The school has been continued and is maintained by the Collegiate Dutch Reformed Church of New York City. It is thus the oldest school in the United States.

Next to this in age is the Boston Latin School, established in 1635. The rent of several islands in the harbor was set aside for its support. To this prominent citizens also contributed liberally.

In 1647 the General Court of Massachusetts ordered that every township should appoint a teacher for elementary instruction, to be paid either by the patrons or by the public in general. When the town had one

hundred or more families it was to maintain a grammar school, a classical secondary school, to prepare students for college. Thus was inaugurated in Massachusetts the American plan of keeping elementary education in touch with the higher.

Connecticut had a public school in 1639, and there was a compulsory feature in its school law of 1650. The selectmen of every town were to see to it that no families allowed their children or apprentices to grow up without being able at least to read and write perfectly the English tongue.

Newport, Rhode Island, established a public school in 1640, and Newark, New Jersey, did the same in 1676. Burlington, New Jersey, established a permanent school fund by selling or renting the land on an island in the Delaware. Philadelphia provided a public school immediately after its founding. When New Hampshire became separate from Massachusetts, in 1693, it at once equally taxed all the inhabitants for the support of schools.

In secondary and higher education the southern colonies vied with those of the north; but the public school idea did not take root there. This was due partly to the scattered condition of the population and partly to the peculiar type of social life.

It is not wise to praise extravagantly the teaching in these first public schools, yet in New Eng-
land it was common for the young graduates
of Harvard to teach in the elementary schools before taking up a profession.

Character of
the Schools.

One of the interesting features of the early New England schools was the hornbook. This was an English

invention. It was a square paddle of wood or pasteboard furnished with a short handle. On it was pasted a sheet of paper containing the small and capital letters, the Arabic and Roman numerals, a number of syllables for spelling, and the Lord's prayer. Over the paper was fastened a transparent sheet of horn. It was one of the most convenient books ever invented, because its shape and strength adapted it to be applied to the body when the pupil lacked diligence, and thus made it serve as a stimulator.

After the hornbook was mastered, the catechism was studied and the Bible was read. The arithmetic lessons were very simple. The hornbook was superseded finally by the primer, which resembled the handbook for children used in the German schools.

The colonists also were by no means behind in interest in higher education. In 1636 the General Court of Massachusetts voted four hundred pounds First American Colleges. for the founding of a college. To this Rev. John Harvard added eight hundred and fifty pounds and his whole library. As the result, Harvard College was opened for students in 1638.

In 1692 was founded the first college in the South, William and Mary, in Virginia. A fund had been created for the purpose as early as 1619, but Indian wars and other troubles prevented the realization of the project at the time. William and Mary started well. It received a royal charter, a royal grant of twenty thousand acres of land, besides an assignment of rents due in the colony amounting to two thousand pounds, and liberal donations from prominent people.

In Europe; Scotland was the one country that rivalled Holland in its interest in public instruction. In 1646 there was enacted a law requiring landlords to provide school-houses in every parish and employ teachers. This law was re-enacted in 1696, and seems to have been then very faithfully complied with. The supervision of these schools was vested in the presbyteries. In many of the schools, both in towns and villages, the masters taught Latin and Greek and prepared boys for the university.

In Scotland.

We have already seen with what rapidity the Jesuits established schools throughout the Catholic world and in mission countries. This continued during the seventeenth century, but in France there arose rival orders that made a deep and lasting impression on educational thought and action in that country. The first and most widely active of these orders was the Oratory of Jesus, instituted in 1614. It differed very much in its character from the Society of Jesus, and just as much in its school work.

*The Oratory
of Jesus.*

The Oratorians taught theology, but they also established secondary schools for all classes. In these latter all instruction up to the fourth year was in the mother-tongue. In the study of history the French language was continued through the course. They gave generous attention to mathematics, physics, and history. They united the study of geography with history, and used mural charts to illustrate lessons. They gave little attention to Greek.

The most radical innovators of all the religious teachers in France were the Jansenists.

Jansenism was a decided reaction in the Catholic Church against the theology and methods of the Jesuits.

Jansenism. It originated in Holland with Bishop Jansenius. It won many enthusiastic followers in France. The French Jansenists made Port Royal, an old convent near Paris, the base of their activity. They were a severely austere body, but took a deep interest in the welfare of the masses. They advocated more evangelical doctrine, and demanded that the Bible and the service of the church be translated into the language of the people and placed in their hands.

In 1643 the French Jansenists opened what they called the Little Schools, at Port Royal. A number of distinguished teachers and authors of text-books and methods were connected with the Little Schools.

In these Port Royal schools the French language was studied before the Latin, and even the Latin grammar was written in French. To make the learning of reading easier, the teachers invented and used the phonic method of spelling. Instead of naming the letters in syllables and words, the pupils uttered the sounds of the vowels and vowel compounds, and then pronounced the syllables or words without trying to give the separate sound values of the consonants.

Port Royal Methods. Up to the age of twelve, besides learning to read and write, the pupils studied the elements of sacred history, geography, and arithmetic. To make the learning pleasant, they were taught these in the form of amusements.

The regular course of study commenced at the age of twelve. In pursuance of the desire to make study a

source of pleasure, the teachers, in pleasant summer weather, instructed their pupils under the shade of trees by the side of brooks. Even in winter, when the weather permitted, they gave their lessons while walking out with the pupils.

As indicated by Nicole, one of the most famous of the Port Royal teachers, their aim was to adapt work to the capacity and disposition of the pupils, and to develop intelligence to the fulness of capacity. Because of the austere views of life that prevailed at Port Royal, the discipline, though kind in intention, was by no means natural and wise.

The schools early came to a melancholy end. The Jesuits secured an order for their suppression. Teachers and pupils were scattered, the buildings razed to the ground, and the very foundations were ploughed up.

Towards the end of the century there appeared a religious enthusiast in the Catholic Church who attempted to do for elementary education and the working classes what the Jesuits were doing for secondary education and the higher classes. This was a priest of La Salle and
his Order. Reims, Jean Baptiste de la Salle. In spite of a delicate constitution, he had persisted in his studies with unflinching energy until he had won a doctor's degree from the University of Paris. Often to keep awake for work he knelt upon sharp stones, and he sometimes placed a board studded with iron points in front of him on his table to waken him when his head leaned forward weighed down by drowsiness. With a similar persistence of devotion he consecrated his life to plans for the education of the lowly. He met with unexpected

opposition from teachers of corporation schools and from the clergy, but he never faltered. When he died, in 1719, he could close his eyes in peace on the abundant fruitage of a beautiful life.

In 1679 La Salle opened a school for boys at Reims. In 1684 he imposed vows upon his disciples and prescribed a costume for them. Thus began the Institute of the Brethren of the Christian Schools. Soon after, in 1688, he went to Paris to found schools there. Besides giving elementary instruction, the Brethren also conducted technical schools to prepare young men for commercial and industrial pursuits. The first of these La Salle founded at Saint Yon, near Rouen.

In his work La Salle had a predecessor in the priest Charles Demia, who had in a somewhat similar manner organized elementary instruction in Lyons.

La Salle wrote out minute directions for the management of the schools of the Brethren. He termed it *The Conduct of Schools*. It performs an office similar to that of the *Ratio Studiorum* of the Jesuits. It has been changed a number of times in the present century, radically in a few of its features.

The course of study outlined for elementary schools embraces reading, writing, orthography, arithmetic, and the catechism.

As in the Port Royal schools, all the first lessons are to be given in the native language. Much attention is to be given to writing, according to the *Conduct*; and first lessons are to be followed by the writing of notes, receipts, and bills.

The teaching described in the *Conduct* is definite and

mechanical. Everything is to be done strictly according to rule. This is true even of every phase of discipline. The ferule is described with interesting particularity. It is to consist of two pieces of leather sewed together. It shall be from ten to twelve inches long, including the handle. The palm shall be oval, two inches in diameter, and rounded with a lining to fit the hand. It is to be applied to the left hand of a culprit so as not to interfere with his writing. The offences for which it is to be applied are specified, and the number of blows for each. The offences for which the rod is to be used are similarly catalogued.

The Brethren have since repudiated corporal punishment. Penances, used from the beginning, serve instead.

The work of the school is to be done as nearly as possible in perfect silence. What is said by teacher and pupil is to be said in a very low tone of voice. La Salle invented a code of signs to be used for many things in place of speech.

In teaching the catechism and arithmetic, the teachers are to question freely so as to make sure that the pupils understand.

Religious training is to be very prominent. The *Conduct* directs that there shall always be two or three scholars kneeling, who will tell their beads one after another. There shall be mass every day, and one-half hour every day shall be devoted to the catechism. One of the forms of penance recommended is to learn a few pages of the catechism by heart; another is to maintain a kneeling posture before the school.

Two things give a notable character to the work of La Salle. Previous to him it was customary for teachers in primary schools to give each pupil his lesson separately. He conceived the plan of grading the pupils, and of giving the pupils of the same grade their lessons at the same time and of having them recite together. Within certain limits this is useful and economical.

La Salle also, more fully possibly than the Jesuits, realized the need of special training for teachers. In 1685 he opened at Reims a "Seminary for Schoolmasters." Afterwards he opened another in the city of Paris. He connected with this normal school a primary school for practice. In the practice school the students in training taught under the supervision of an experienced teacher.

When La Salle died he had founded one normal school for the Order and four for the training of teachers in general, three practice schools, thirty-three primary schools, and the technical school at Saint Yon. The Institute has extended its existence and activity into a number of countries in Europe, into Canada, into the United States, and into Africa and Asia. The Christian Brothers are now teaching in the different countries more than three hundred thousand primary pupils.

Corresponding in general spirit to the Jansenist movement in the Catholic Church, there arose a Protestant revival but little later. The religious status of Europe in the seventeenth century was in many respects far from ideal. Much of the fervor of the Reformation era had

died away. The division of western Christendom had plunged the different religious bodies into vigorous, even virulent, discussions. There naturally ensued a strongly marked tendency to make religion a mere matter of theological definition and theory. This more and more made genuine piety of life a secondary matter. The unfortunate features of the religion of the time were multiplied and intensified by the fact that religious questions were still vitally connected with affairs of state. The separation of church and state was as yet dreamt of by few. As a consequence, religious bodies became involved in all kinds of political intrigues and cruel persecutions. Pious and thoughtful men grew weary of these things.

In the Lutheran Church there arose a strong reaction against the prevailing state of religion. It was an effort to make religion at least as much a matter of the heart and daily life as of definition and philosophy. In mockery, the leaders of the movement were called Pietism. Pietists. Their zeal soon gave the term dignity and honor. The foremost among them was Philip Spener. In 1670, while pastor at Frankfort-on-the-Main, he began to hold meetings for Bible study and the development of true gospel piety. His position afterwards as chief court preacher gave him great influence. In 1691 the Pietists under his leadership founded a university at Halle. Spener was instrumental in having called to this institution August Hermann Francke, a man well worthy of study. His life is full of inspiring power, and his work marks an epoch in the history of education.

Like Ratich, Francke was a Lutheran from the north of Germany. He was born at Lübeck in 1663. He was

prepared for the university in the gymnasium at Gotha, and pursued his university studies at Erfurt, Kiel, and Leipsic. He studied theology, but went over Francke's Life. the whole range of general learning, including among his studies physics and natural science. His principal attention was given to Hebrew and Greek. For a time he located at Leipsic as "privat-docent." During this time he originated the Collegium Philobibulum, an organization of graduates for the systematic study of the Bible. He was encouraged in this by Spener. After varied experience as pastor, teacher, and Bible lecturer, he was called to the chair of Greek and Oriental languages in the new university at Halle. Here he did the great work of his life. Thirty-six years his labors continued, almost to the very day of his death.

What Francke achieved at Halle almost passes belief, and yet it had a very humble beginning. He received no salary as professor, so he was appointed pastor at Glaucha, a suburb of Halle. Every Thursday the poor assembled at the parsonage for alms. He took advantage of this gathering to instruct the children in the catechism. For a time he ate no supper, in order that he might save money to help them.

In 1695 he fixed a contribution-box in his room. One day a benevolent lady put in it seven florins. The gift touched the deeper chords of his soul. With the happiness of a man finding his life, he exclaimed, "This is veritable capital. With this something proper must be done. I will found a school for the poor."

The seven florins were like the grain of mustard seed in the Bible parable. On the same day in which he

received the florins Francke bought books and employed one of the students at the university to teach the poor children two hours a day at his house. Before the first summer had passed the number of pupils had increased to sixty. Among them were children whose parents could afford to pay, so it became possible to keep the school open five hours a day. Its fame brought gifts of money and additional pupils. Rooms were rented, then houses, and after a time Francke commenced to build. With the courage of a sublime faith and the enthusiasm of unbounded love, he planned institutions and buildings apparently far beyond his resources.

Beginning his
Institutions.

Everything prospered in his hands. Often he believed unexpected and timely gifts to be special answers to his prayers. His plans grew out of the conditions that formed themselves from the results of his own activity. Before the year 1695 had come to a close, three sons of noblemen were sent to him to be educated under his supervision. This suggested to him the *Pedagogium*, one of the most famous of his schools. And so one institution grew out of another until they formed a complex whole, extensive as a separate village, large and remarkable.

At the time of Francke's death, in 1727, the principal institutions were the following:

1. *Burgher Schools*, with seventeen hundred and twenty-five pupils, boys and girls, taught by ninety-eight male and eight female teachers under the supervision of four inspectors. Among the pupils were many orphans.

The
Institutions.

2. The Latin School of the Orphan House, with four hundred pupils.

3. The Pedagogium, having eighty-two students.

4. The Orphan House, with one hundred boys and thirty-four girls.

In addition to these were a home for women, a large apothecary establishment, a free table where hundreds of needy students got their board, and a publication house. Through the latter, at the suggestion and with the help of friends, Francke undertook the publication of cheap editions of the Bible for generous distribution. He also assumed the establishment and direction of an active mission on the Coromandel coast.

Possibly in the whole range of pedagogical history there cannot be found another man whose personal labors were at once so varied and strenuous and so lofty in character, nor another who realized so many immediate, profound, and far-reaching results. Francke was the living verification of the inscription he had placed over the entrance to his institutions: "They that wait upon the Lord shall renew their strength; they shall mount up with wings as eagles; they shall run, and not be weary; and they shall walk, and not faint."

Francke's institutions were not less remarkable for the character of the work done than they were for the rapidity and extent of their growth. What others philosophized over and advocated he did.

The Burgher Schools were German schools. In them no Latin was taught. They corresponded to the mother-tongue schools in the scheme of Comenius. At first the pupils were taught only religion, reading, writing, and

arithmetic. Later, natural science, history, geography, and other studies were added. The girls were also taught to do suitable work. Even the orphan boys were taught to knit. These schools realized definitely the form of the present German elementary schools.

The Burgher
Schools.

The Latin School was a secondary school designed to prepare its students for the university. Besides religious instruction, the course included arithmetic, Latin, Greek, Hebrew, higher mathematics, history, geography, and music.

The Pedagogium was a secondary school of a higher order. In it were taught Latin, Greek, Hebrew, and French, besides German, arithmetic, geography, history, astronomy, geometry, music, botany, anatomy, and the elements of medicine. The most notable fact of all was that there was connected with it a botanical garden, and that it was equipped with a science cabinet, with physical apparatus, a chemical laboratory, conveniences for anatomical dissection, turning lathes, and machines for grinding glass. The students were to learn wood-turning, glass-grinding, painting, and sketching.

The
Pedagogium.

The Pedagogium certainly was a modern school. Better than most of the innovators could have planned, their fundamental ideas were realized here. To this the extensive use of the *Janua* and the *Orbis Pictus* in the German gymnasia had furnished the stepping-stones.

Most of the teachers in Francke's institutions were students in the university, who were thus enabled to maintain themselves. Their scholarship was sufficient,

but they generally were untrained and inexperienced as teachers. So Francke found it advisable and necessary, as the Jesuits and Christian Brothers had before, to train his teachers for their work. He therefore maintained a training-school, the forerunner of many.

Whatever was good in the Reformation for religion and education seems to have ripened in Francke, and whatever was good in the text-books and the *Didactica* of Comenius seems to have come to abundant fruition in his work. The very weakness of his schools, resulting from the necessity of using university students as teachers, made them greater sources of blessing. The service of the teachers naturally could not be of the best, because they generally taught but three years and had their attention divided between their teaching and their studies. But thus was increased the number of those who became familiar with the work and imbued with its spirit. These young men, filled with the enthusiasm of the great institutions, carried their influence into every part of Germany. The institutions of Francke still live, a monument to a noble soul instinct with love for God and humanity. He sank to sleep happy in so full a realization of the prayer, often repeated during his life, "Do thou be my God, so will I be thy servant."

Francke's work was fairly well started when the seventeenth century closed. In his institutions were realized the best aspirations and plans of its progressive educators.

Before proceeding to the consideration of the next

century, it is well to review the leading features and events of the whole Classic Period. They are the following :

1. One of the best and most prominent features of the period, extending from the latter part of the fifteenth to the end of the seventeenth century, was the wide extension of intense educational interest and the rapid multiplication of schools. This activity was due mainly to the Revival of Learning, the Reformation, and to increased industrial enterprise.

2. In the control of education religious interests predominated throughout the period. Even the schools supported partly or altogether by the state were under the supervision of the clergy.

3. In spite of all efforts in opposition, humanism continued to be the supreme feature in the courses of study.

4. The hope of the future supremacy of the mother-tongue was to be found in obscure elementary schools, the theories of innovators, and the changing conditions of life.

5. The most definite promises for the future of realism were given by the discoveries of the scientists, the writings of Bacon, and the work of Comenius and Francke.

6. The field of mathematics was enriched in the seventeenth century by the labors of Descartes, Newton, and Leibnitz. Descartes introduced the use of exponents in algebra, and explained negative roots. He also enlarged geometry by devising analytics. Newton and Leibnitz invented the calculus.

7. Throughout the period girls were not so generally

educated as boys, and confined, for the most part, to the instruction of elementary and convent schools. Towards the close of the seventeenth century Madame de Maintenon, influenced by the writings of Fenelon, introduced a course in literature and the production of French plays in the convent at St. Cyr; but the girls displayed such spirit and vivacity in the plays, and took such delight in the literature, that she became alarmed at the experiment and dropped it. She returned to the old convent course of devotions, household employments, and limited study.

8. In this period began the public school with the Reformation, and compulsory education. Gotha had a compulsory law in 1619.

HISTORICAL SUMMARY

Renaissance began with Petrarch and Boccaccio	14th century.
Gerhard Groot founded Brethren of the Common Life	1383
Chrysoloras began to teach Greek at Florence	1395
Constantinople captured by Turks	1453
Wessel, Agricola, and Reuchlin studied Greek at Paris about	1470
Grocyn began to teach Greek at Oxford	1492
Reuchlin published <i>Hebrew Grammar</i>	1506
Dean Colet founded St. Paul's Grammar School	1512
Erasmus published Greek New Testament	1516
Zwingli began to preach Reformation at Einsiedeln	1516
Luther nailed Theses to church door at Wittenberg	1517
Luther wrote letter of appeal for public schools to Magistrates and Councils of German cities	1524
Luther published translation of Bible	1534
Melanchthon formulated Saxony school plan	1528
John Sturm opened Strasburg Gymnasium	1538

Loyola founded Society of Jesus	1540
Ascham's <i>Scholemaster</i> published	1570
Montaigne's <i>Essays</i> published	1580 and 1588
Ratich's school opened at Anhalt-Köthen	1619
Bacon published <i>Novum Organum</i>	1620
Comenius wrote <i>Didactica Magna</i>	1628
Comenius published <i>Janua Linguarum Reserata</i>	1631
Comenius published <i>Orbis Sensualium Pictus</i>	1654
Port Royalists opened the Little Schools	1643
La Salle opened a school for boys at Reims	1679
La Salle founded Brothers of the Christian Schools	1683
Fenelon published <i>The Education of Girls</i>	1687
Locke published <i>Thoughts on Education</i>	1692
Francke began his institutions	1695
Francke formed teachers' seminary	1707

PART V

THE EIGHTEENTH CENTURY

A PERIOD OF TRANSITION

XXI

FIRST HALF OF THE EIGHTEENTH CENTURY

THE work of Francke topped the educational activity of the seventeenth century and began that of the eighteenth. Just as it was transitional both in position and character, so the educational labors and aspirations of the eighteenth century may be regarded as forming the change from the period of classical supremacy to the triumph of the public schools and the sciences in the nineteenth century.

Features of
the Time.

Changes as great and numerous as those which lend such lively interest to the educational history of the sixteenth century did not occur, but the time was not colorless from lack of events. There was deep and thorough preparation for the occurrences that were to make the nineteenth century glorious beyond all that had preceded it. Early in the century Ledru Rollin made a notable contribution to pedagogical theory. More important than this was the development, principally in Germany and Austria, of what the Germans call *Realschulen*, literally, real schools, and of numerous teachers' seminaries. There was also a significant humanistic revival, and a beneficial transformation of the work in the universities. Before the century was well advanced began that radical change in the ideas of men which culminated in the great revolutions of its last

quarter. These revolutions profoundly modified the destinies of nations, and gave to the race an enlarged horizon dazzling with the brightness of its promise.

Rollin attempted a summary of all that was best in educational theory and practice. His work, *A Treatise on Studies*, appeared between the years 1726 and 1728. He approached his task well equipped. His experience had been extended and crucial. To a wide range of scholarship he added rare good sense and a placid, genial temper. He was in sincere sympathy with the principles of the Jansenists, and that made him alive to whatever was good in the advocated and attempted reforms of the previous century.

He had devoted many years of his life to teaching. He held the chair of eloquence in the Royal College of France for some years, was afterwards principal of the College of Beauvais, and twice rector of the University of Paris. While holding the latter position, he was the main instrument in remodelling the courses of study in the university and modernizing them.

In the *Treatise*, Rollin ranged himself by the side of the advocates of the mother-tongue, of realism, and of the study of history. For perfecting the use of the mother-tongue he advised care in articulation and pronunciation, training in the correct use of words, grammatical study, literature, translation from other languages, and composition. He declared that the early instruction in Latin should be given in French. He regarded history, as had Luther long before, a means of forming the mind and heart of youth. In addition to advocating the study of plants and animals, he gave sensible directions to

teachers as to the manner of preparing for the work. One of the best and most pleasing features of the *Treatise* is the intelligent and humane discussion of the principles and methods of managing children. The work has been very influential in France, and was early translated into English.

Most of the development of real schools and training-schools for teachers in the eighteenth century is traceable to the work of Francke. The real school was a new type of secondary school. It emphasized attention to mathematics, drawing, geography, history, natural science, and agriculture. It made study by direct observation a prominent feature of its work, or at least professed to do so. It was a triumphant step forward in the new educational revolution. The term Real was first used by Semler in 1739, in a report on his school at Halle. He had been intimately associated with Francke. The first famous real school was established in Berlin in 1747, by Johann Julius Hecker. There was soon a number of imitators. These early real schools made the mistake of trying to retain all the old and adding the new. They also made efforts to prepare for special callings. Their courses thus became too extensive, and the work was rendered defective. But they had come to stay. Growing conditions demanded them. They were the forerunners of our Latin-scientific and technical schools.

The Real
Schools.

It is claimed that Frederick William I., of Prussia, founded the first state teachers' seminary in Stettin in 1735. He had one of Francke's adherents in charge. Hecker opened a teachers' seminary in connection with

his real school in Berlin in 1748. This was adopted by Frederick the Great as a state institution. The first one of these schools to be known as a normal Teachers' Seminars. school was established in Vienna in 1771. The school was very much like many of the American normal schools. It was intended not only to train teachers, but to serve also as a model for imitation. It was a combination of elementary school, real school, and teachers' seminary. It became a part of a scheme for general education in Austria, whose accomplishment Maria Theresa placed in charge of John Ignacius von Felbiger. He was a Catholic abbot, who took deep interest in popular education and had been profoundly impressed by the educational principles and labors of the Pietists. He personally visited Hecker's school in Berlin, and sent a number of young men there at his own expense to learn the methods. In pursuance of the scheme, there were soon fifteen normal schools in Austria. In Germany there were about thirty training-schools by the end of the century.

The year 1738, it may be noted too, saw the beginning of university instruction in pedagogy. In that year Gesner founded a pedagogic seminar at the new university of Göttingen. Nine students of theology formed the first seminar. To prepare for teaching they were bound to study, in addition to their theological course, all the philosophical studies, mathematics, physics, history, and geography. The director gave instruction two hours daily in the different branches of a secondary course and in the methods of teaching them. Once a week there was

Pedagogy
in the
Universities.

disputation in Latin on philosophical subjects. The students were to do practice work in the schools of the town. Following the example of Göttingen, other universities added lectures on pedagogy to the course in philosophy.

The tendency in humanism from the beginning had been to use the classic authors as means of increasing vocabulary and enlarging the command of idioms, as treasuries of material for drills in grammar and rhetoric, and as helps to the cultivation of style. As the first enthusiasm of humanism declined The New Humanism. this tendency increased. Gesner at Göttingen endeavored to change this by directing the attention of humanistic students to the classic authors as masters of thought and poetic beauty. When studying a classic text, he sought to reproduce the conditions under which it was written and the mental equipment of the author. Whatever he could find that would enable the student to realize the exact thought and tone of feeling which the text was created to express, that he used. He sought to make the past, as it had found expression in literature, breathe again and talk to the student with the warmth and clearness of life. His efforts were seconded by his friend Ernesti, of the Thomas school at Leipsic, and continued by his successor Heyne and the distinguished philologist F. A. Wolfe at Halle. These men established the new humanism by sending out from their institutions trained teachers, imbued with the spirit of their work, to teach in the secondary schools throughout Germany. The best results of their labors are found in the richly annotated and illustrated texts with which the riper

scholarship of the nineteenth century has enlivened and illumined the study of the ancient literatures.

The forms of thought that prevailed in the beginning of the eighteenth century became repulsive to many active and original thinkers, and its social conditions were well-nigh intolerable. The measures adopted by dominant religious authorities to establish and maintain uniformity were extremely harsh and rigorous, heartless to a degree incomprehensible now. The theology of the time, of the different Protestant bodies especially, was generally sombre, hard, and narrow. Society was burdened by the large numbers of the hereditary aristocracy who added nothing to its productiveness, avoided its taxes, and lived in profligate extravagance on the revenues wrung out of the life-blood of its toilers. The great body of the people lived in pitiable and hopeless wretchedness. In France the peasants were forbidden even to raise crops at certain seasons and to fence their fields, in order that they might not interfere with the hunting of the nobles.

In England, and still more generally in some of the Catholic countries, the wretchedness of the state of affairs was increased by the fact that the high offices of the church were frequently sought by younger sons of noble houses who had not the slightest pretence of devotion to the interests of religion. They desired the offices for the revenues and social prerogatives attached to them.

Whether for good or ill, two great events had not slightly changed the attitude of men's minds towards the social questions involved in these unhappy conditions:

These were the Reformation and the revolution that had established the Commonwealth of England. A divinity had hedged in officers of religion and state and permitted them to exercise or abuse their functions without question; but with many people that was now a thing of the past. When the English people beheaded their king at Whitehall, they gave a shock to the doctrine of the divine right of kings from which it has never recovered.

Primary Causes
of Change.

Probably matters were no worse in the eighteenth century than they had often been before; but the spirit of the masses was awakening. People generally developed a keener sense of wrong, a more eager longing for a closer approach to equity and a wider range of opportunity. So revolutions came on apace. Some were wrought quietly in the studies of scholars and thinkers; some came through acrimonious debate; some, like our American Revolution, were won nobly on the field of battle; and some arose from the bloody deluge of the Reign of Terror.

The first great changes were changes in thought. Side by side with the Methodist revival in England there developed a vigorous effort to reject all the special claims of Christianity. Men arose who asserted that the beliefs peculiar to the Christian religion were as ill-founded and worthless as those distinctive of Judaism and Mohammedanism. They sought to substitute for it a natural deism. This deism rapidly spread over the continent of Europe, and also deeply influenced some of the strongest minds in America. It found ardent champions in France, where

Revolt in
Religious
Thought.

most of the free-thinkers became pronounced atheists. The astronomer Lalande declared that he had swept the entire heavens with his telescope and found no God there. This atheistic thought was shallow and flippant, being purely reactionary, yet back of it there was a large measure of generous sympathy for humanity.

In economic philosophy certain ideas became strongly rooted in men's minds. The most prominent of these were : (1) that man originally lived in a state of Nature ; (2) that society rests upon a social contract voluntarily made by men for the enforcement of laws and the protection of rights which naturally belong to all men ; (3) that a false inequality exists among men because some usurp what by natural right belongs to all.

This philosophy had commenced with Hobbes and Locke in England. In the form which it assumed in the eighteenth century it was in the interest of the masses of the people. Coupled with deism and atheism, it finally found expression in the bloodshed of the French Revolution. Its most powerful mouthpiece was Rousseau, who also translated it into the most brilliant and influential educational theory of the century.

XXII

JEAN JACQUES ROUSSEAU

It seems impossible to present Rousseau's educational theories intelligently without devoting to him more space proportionally than he deserves. The best efforts to discuss his *Emile* briefly must necessarily be unsatisfactory.

Rousseau was admirably fitted by natural endowment, by training, and by lack of training to be a leader in revolutionary thought. He was born in Geneva in 1712. His mother was the daughter of a Protestant minister. She was a refined lady, but of overwrought sensibility, much intensified by reading highly colored, sentimental romances. His father, a watchmaker, was of French descent, lively, romantic, passionate of temper, and dissipated in habit. Rousseau's birth caused his mother's death, and he was left to the care of an indulgent aunt. He grew up without moral discipline, subject only to his own lively and precocious caprice.

Early Life.

When he was six years old he was able to read, and he and his father frequently sat up all night indulging in the intoxication of pathetic love stories and exciting tales of adventure. When he was seven, they read Bossuet's *Lectures on Universal History*, Ovid's *Metamorphoses*, and Plutarch's *Lives*. The last of these especially fascinated

him and inflamed him with passionate republican and heroic sentiment. All tended to make him extreme in sensibility and leave him destitute of the moral fibre that comes by discipline. Nothing in his experience afterwards corrected this.

At eight he was placed, together with his cousin, in charge of a clergyman in a small village near Geneva. He received lax training there for two years, and learned little except to love ardently the freshness and beauty of the country. The happiness of those years ended with a severe punishment which he received for a slight offence, and against which he bitterly rebelled.

He was later apprenticed first to a notary and then to an engraver. At the age of sixteen he ran away because of alleged coarse and violent treatment. He had thus early developed a number of loose and vicious habits.

After a varied and unclean vagabond life, he went to Paris in 1741. He there became the *protégé* of prominent people and the intimate acquaintance of eminent literary leaders. He produced plays and operas that won him some fame. At this time he took up with a coarse, illiterate woman named Therese Le Vasseur. Their five children he placed in foundling institutions and entirely lost sight of them.

He achieved his first really striking success by winning a prize with an essay on the subject, *Has the restoration of the sciences contributed to purify or to corrupt morals?* In this essay he tried, with dazzling eloquence, to prove that science and art, social organization and culture, have deluded and corrupted human life, and that the nobility of truth, purity, virtue, and courage are

Literary
Career.

to be sought in a state of Nature, in the life of the "noble savage."

He followed this work with another on the subject, *What is the origin of inequality among men, and is it authorized by natural law?* In it he attributed the vice, misery, and slavery of human society to inequality, and inequality to the establishment of law and private property, the institution of the magistracy, and the assumption of arbitrary power.

He added to these the *Social Contract*. In this work he proposed an organization of society that should be governed by the general will, and should preserve all the individual members free and equal in the enjoyment of their natural rights.

Rousseau's great work on education, *Emile*, belongs to this series, and was the third in the order of publication. Many things in it are directly traceable to Montaigne and Locke, but the general character of the work was determined by the author's social theories, and by his peculiar character and disposition.

Rousseau wrote *Emile* partly as a formal treatise, partly as a romance. *Emile* is a boy, and his education is described in the book.

The key to the theory propounded in *Emile* is contained in the first propositions. "Everything is good as it comes from the hands of the Author of Nature; but everything degenerates in the hands of man. . . . He overturns every-
The
Introduction
to *Emile*.
 thing, disfigures everything; he loves deformity, monsters; he will have nothing as Nature made it, not even man; like a saddle-horse, man must be trained for man's

service,—he must be made over according to his fancy, like a tree in his garden.” “We must be educated because we are born weak.” “We derive this education from Nature, from men, or from things.” “Each of us is thus formed by three kinds of teachers.” “He in whom they all agree, in whom they all tend to the same end,—he alone moves towards his destiny and consistently lives; he alone is well educated.” “Since men cannot control Nature, only partly control the education of things, and can control their own educational efforts, they must make their own education and that of things, as far as they can, conform to Nature.”

In consequence of these propositions,—

1. Emile must be removed to the country, where the
 Logical corrupting influences of civilization are least
 Consequences. concentrated.

2. His growth must be as nearly spontaneous as possible.

3. He must not learn to read until he is twelve, and read but little.

4. His teacher must not exercise authority over him.

5. The teacher must not even teach him anything in the ordinary sense of the word, only bring him into such contact with things that he may make the desired discoveries for himself and act of his own accord.

6. The teacher is to do all this so skilfully that he really controls and directs all Emile's activity, though the boy thinks that he does it all himself.

His education is divided into four periods, those of infancy, childhood, boyhood, and adolescence.

In his infancy Emile's mother must be his nurse. If capable, his parents should continue to be his teachers, otherwise he should be removed from them.

It happens that he is early left an orphan, so his tutor, Rousseau, becomes his inseparable and exclusive companion.

Infancy
(5 years).

He is allowed to suffer the natural consequences of his acts. He gets needed help when he cries for it, but when his cries arise from caprice or obstinacy no help is given. He is bathed in water varying from hot to cold, and is allowed no swaddling-clothes nor go-carts. No medicines are administered to him. His physicians are temperance and labor. He is permitted to have neither bells nor toys, but is encouraged to amuse himself with flowers and poppy-heads. He is not hurried to learn to talk.

Emile is not taught in the second period as a man for a man's life. He is taught as a child and for a child's life. He is not protected from the accidents incident to his age, nor humored in his sufferings. From them he learns fortitude and prudence. To avoid insincerity, he learns no formulas of politeness. He hears nothing of duty and obligation, nothing of good and evil, as these things are not the business of a child. He is never commanded to do anything. He receives no verbal lessons. He is never punished. If he breaks a window, it is not mended for him; but the wind is allowed to blow over him night and day, even if he grows sick. He does not learn to read, neither does he study the languages, nor history. He learns nothing by heart.

Childhood
(from 5 to 12).

He gets much exercise and plenty of sleep. He is

obliged to wear scanty clothing and sleep on a hard bed. He becomes accustomed to darkness by playing games at night. He becomes hardy and venturesome by climbing trees, scaling rocks, and leaping over brooks.

He learns to swim and to use all his senses. He learns the weight of bodies at sight, and the proper length of levers by moving bodies with them. He learns to measure distances by such devices as putting up swings and running races. He learns to draw by making pictures of the things around him, and he decorates his rooms with the drawings as an incentive to effort. He also learns to sing by note.

When Emile is a boy it is still the tutor's main business to shield him from error. He must yet do nothing against his will. He must learn only what is
Boyhood
(from 12 to 15). useful, and Rousseau's idea of the useful is very materialistic. He must discover facts in physics, geography, and astronomy by observation and experiment, and determine their relations for himself.

He studies the hills, roads, and streams in his neighborhood, and makes maps of them. About noon one day the tutor contrives to have himself and Emile apparently lost in the forest, and Emile is led to find the way home by means of the sun's shadow.

In this period, too, Emile learns a trade,—one that is genteel, that will not soil his hands nor his clothing too much, nor destroy the proportions of his figure. Now he also learns to read. His chief reading is *Robinson Crusoe*, that he may learn the delight and glory of irresponsible, natural life, and the dignity and pleasure of self-help.

Rousseau assumes that prior to the age of fifteen Emile has capacity to think only of himself and understand only his relations to natural objects. ^{Adolescence} He thinks that the ability to understand and (from 15 to 20). appreciate relation to men comes with adolescence. So Emile in his adolescent period develops his affections and his moral and religious sentiments. He is brought into contact with the humble and unfortunate phases of human life to protect him from pride, vanity, and envy, and to awaken within him sentiments of pity and sympathy and ideas of goodness and justice. He now also begins to feel grateful to his tutor, and thus gives the latter a stronger hold upon him.

To preserve him from exaggerated self-love he is exposed to the arts of knaves and sharpers. He studies history to enable him to estimate human life properly. He also reads fables so that their indirect moral lessons may improve him without giving him offence.

To arm him against the passions that now begin to stir within him he learns religion, to know the God of that nature which he has previously studied. He is not instructed in the doctrine of any sect. He is expected to connect himself with such denomination as may commend itself to his judgment.

Emile's education is now completed and he is ready for a life companion. She is found for him in the person of Sophie. The last chapters in the book describe her education.

Sophie is educated as a woman to be a woman, just as Emile has been educated to be a man. Women must be educated with reference to men, to please them, to

be useful to them, to make themselves loved by them, counsel them, console them, and make life agreeable and sweet for them. Sophie, therefore, is brought up to be strong and robust. She learns to sew, embroider, and make lace. She does not learn to read and write early. Most women abuse these arts. She learns to be obedient and industrious, and develops gentleness and patience so she may endure without complaint the wrongs inflicted by a husband. She is allowed to dance and sing. She must accept her mother's religion, because she cannot understand such matters. She forms good taste in dress, and studies men that she may know how to please Emile, and by pleasing him govern him. Truly, Rousseau's theory of female education does not reveal high estimates of womanhood.

Of all pedagogical works, *Emile* is one of the most interesting to study, but it must be read with critical thoughtfulness. Like its author, it is unsound in logic and rebellious against society. It abounds in contradictions and extravagant paradoxes. It is erratic, generous in its impulses, brilliant, ardent.

Rousseau's fundamental blunder is his proposal to give to a social being an unsocial education. Society embodies the attainments and energy of racial development. It does not necessarily corrupt. Under proper conditions it completes, it stimulates, it enriches. His fellows contribute to the moral and intellectual development of the individual what nothing else can. Emile's religious education illustrates the fallacy of the scheme. However plausible and attractive his natural deism may

seem, it will not bear close inspection. It is a mere matter of sentiment. Beautiful it may be, but it lacks the substance and power of a truly ethical religion.

Rousseau exaggerates the principle of personal observation and inference and opposition to book learning into a serious pedagogical error. It robs Emile of the heritage of the past and the help of the present. Such a system would render the race static, non-progressive.

In spite of Rousseau's keen insight into many phases of child nature and development, his knowledge of children was very defective. The periods in Emile's education present many artificial and unnatural leaps and breaks. The attractive summaries of results with which Rousseau flatters himself are by no means warranted by fact.

Emile was, in truth, an impossible boy subjected to an impossible education. He was the creation of the not overhealthy imagination of Rousseau working upon the irregular and abnormal experiences of his life, and fashioned under the influence of the theories of Montaigne and Locke. There is, probably, no main proposition in the book that will bear close logical inspection. Its brightest feature is the passionate love of nature which pervades it. This is traceable to the author's sensitive disposition and the tutelage he received at the home of the clergyman near Geneva. It grew with all the vicissitudes of his strange life.

With all its defects, *Emile* is a strong book. It created an epoch in educational history. It presents such details of observational and experimental work in elementary training as had never before been attempted. It

gives strong emphasis to the common interests of humanity, which are often sacrificed in educating a boy to be a priest, a soldier, or a citizen. With all its Merits.

mistakes, it presents the details of child development with such convincing clearness and force that it has given an impetus to child study. More important than all else, it teaches, as even Comenius did not, that education consists not in bondage to any tradition of learning nor any form of scholarship whatever, but in the development of the man.

The book was written in a marvellously clear and brilliant style. It came to men when they were eager for just such truth as it contained, and it took a magical hold upon their minds. It inspired and directed men of much nobler type than the author, and through them it has achieved great and useful changes in elementary education.

XXIII

THE PHILANTHROPIN AND OTHER DEVELOPMENTS

THE first experiment inspired by *Emile* was made in an institution known as the Philanthropin. Its name was to indicate that it was actuated by love for humanity and designed to promote a truly human education. It was located, under the patronage of Prince Leopold, at Dessau, not far from Köthen, where Ratich had made his famous experiment. Its founder was Basedow, who opened it with boastful claims very similar to those of Ratich, and no less extravagant.

Basedow was from the north of Germany. He had prepared himself for the Lutheran ministry, but was not ordained because he lacked orthodoxy. He taught for a time as a private tutor, and afterwards as a gymnasium professor. He was very successful as a tutor because of the intelligence and originality of his methods. By means of conversation exercises concerning the birds, plants, and other objects about them, he soon taught his pupils to talk Latin almost as well as their mother-tongue.

Under the influence of Rousseau he was led to form comprehensive plans for the reform of education. The chief results were two works, a *Book of Methods* and an

Origin of the
Philanthropin.

Its Founder.

Elementary Book. A large part of the latter was modeled after the *Orbis Pictus* of Comenius.

The Philanthropin was founded to carry his plans into execution. It had the endorsement of eminent men, including Immanuel Kant, the great philosopher. In fact, Basedow had made considerable stir throughout Europe, going about with his queer personality, but with irresistible enthusiasm, to solicit help for the publication of the *Elementary Book*. He received liberal contributions from Emperor Joseph II., Catherine II., of Russia, and from Christian VII., of Denmark.

The Philanthropin was opened in 1774. That it was not a servile effort to carry out the ideas of Rousseau may be known from the fact that Wolke, one of its leading teachers, had, under the direction of Basedow, taught the latter's daughter to speak and read with ease German, French, and Latin by the time she was five years old.

The boys and girls in the Philanthropin were dressed plainly and with reference to comfort and freedom of movement. The shirts of the boys were made with wide collars turned down over their jackets and open at the neck. Their hair was cut short. This was in revolt against the long, powdered hair and dandified dress that was the prevailing style with the children of those who could afford it. For the first time in the school history of Germany, the boys were given gymnastic training. They were also encouraged to play much in the open air, and were taken on excursions into the country. For manual training they were taught carpentering and turning with the lathe.

Physical
Training.

Latin and French the pupils learned through conversation exercises based on models and pictures, and in games. They learned first to speak and afterwards to read and translate. The methods are perhaps best revealed in exercises witnessed and reported by visitors to an examination.

In one exercise in Latin the pupils were all made to stand in a row. Wolke then issued commands in Latin, which they obeyed. When he said "Circumspicite," they all looked around in different directions. When he said "Imitami sutorem," they pretended to draw waxed threads like cobblers. In a similar exercise he ordered them to imitate the sounds of different animals. At command, they roared like lions, barked like dogs, or mewed like cats.

In one exercise somebody wrote a word on the back of the board, and the pupils were told to what department of knowledge it belonged. They then tried to guess the word. For instance, if it was the name of a part of the body, they named over the different parts of the body that occurred to them, as "caput," "os," "oculi," "nasus," "digiti," until some one hit upon the word selected.

In still another exercise, Wolke placed himself at the board with crayon and asked the children what he should draw. Some one answered "Leonem." He pretended to draw a lion, but put a beak on it. The children immediately shouted "Non est leo, leones non habent rostrum." And so they continued, he to blunder purposely in the drawing and they to correct him, until the work was finished.

At this examination, too, the children acted comedies, one in French and one in German.

The pupils drew much. Following Rousseau in this, they made pictures of the things about them. They seem to have received good training in arithmetic, geometry, and trigonometry. The text-books prepared by the teachers of mathematics were widely used. There was nature study, geography, physics, and astronomy. These studies were supposed to be, and largely were, based on observation, but the work was poor. It lacked system, and was mixed with all sorts of foreign and incomprehensible material.

The religion of the school was a natural deism and the liturgy and worship undenominational. This was in harmony with the general spirit of the Philanthropin, and was expected to make it generally acceptable, but it failed to do so. When the teacher thought the time had come to awaken the idea of God in a pupil and lead him to reverence and gratitude, he kept him in the house four or five days, so that he might be specially impressed with the wonders and beauties of creation when again allowed to behold them, and thus be prepared for the declaration that God made them all.

Basedow dropped out of the institution in a few years because of quarrels. For a time Wolke was at its head.

At different times strong men, like Salzman and Campe, were connected with it, and left it to found similar institutions in different parts of Germany. One also was established in Switzerland. Some of the teachers were called to other schools as training

Other Studies.

Religion.

Later History of
Philanthropin.

teachers. The Philanthropin was closed in 1793. It failed from lack of support occasioned by overcrowding the course, by improper grading of work, by failure to adapt work to conditions beyond its walls, and by the unpopularity of its deism. Most of the similar institutions continued a sickly existence for a time until they were superseded by the reforms instituted by Pestalozzi. They served a useful purpose. They introduced more rational methods and other much-needed reforms even into the schools that derided them. Some of the work was excellent and anticipated the best of its kind done now.

In the development of all grades of educational work in the eighteenth century Germany led the way. Among the German states, Prussia made the greatest advance in elementary instruction. In the reign of Frederick the Great alone there were established in the realm about seventeen hundred elementary schools. In the extent of state support of elementary education, only Austria outrivaled Germany. The extension and improvement attempted by Maria Theresa with the help of Felbiger were continued by her successors until near the close of the century, when a clerical reaction seriously injured the work. In the reign of Maria Theresa, Ferdinand Kindermann in Bohemia added instruction in local industries to elementary training.

Growth in
European
Elementary
Education.

The century saw the beginning of public schools in Denmark and of compulsory education in Norway. In France the schools of the Christian Brothers multiplied rapidly. The French Revolution led to the enactment

of many decrees to organize and improve education on a state basis and establish normal schools, but little of practical value resulted.

Among the great educational events was the founding of the Sunday-school. This was not a new institution, but a revival of a very old one. It had its The Sunday-Schools. prototype in the Hebrew Bible school. At different periods in the history of Christendom somewhat similar schools had arisen. When St. Carlo Borromeo, archbishop of Milan, died, in 1584, he left seven hundred and forty-three Sunday-schools as the result of his interest in the religious instruction of children. In the seventeenth century Sunday-schools were established at different places in England and New England. In Pennsylvania the Schwenkfelders had Sunday-schools as early as 1734, and Ludwig Höcker, of the Dunkard Brethren, opened one at Ephrata, Lancaster County, in 1740. The great Sunday-school interest of the present time, however, seems to have had its principal source in the work of Robert Raikes.

Raikes was editor of a newspaper in Gloucester, England. With the help of a few friends he opened a Sunday-school in 1780. He was moved to this by the miserable condition of the children of the poor. Many of them lacked both secular and religious training, and it occurred to him that it would be well to gather them in on the Sabbath day from the filth and riot of the streets, and instruct them in the elements of religion and in reading and singing. The effort prospered. In his enthusiasm Raikes advertised the work in his paper, and soon inspired others to imitate him.

The Sunday-school work has assumed immense proportions. In the United States alone there are now connected with Sunday-schools as teachers and pupils about fourteen millions of people. The beneficence of the institution cannot be estimated, and its possibilities have not yet been exhausted nor even comprehended.

When the century opened, the universities had already deeply felt the influence of the great scientific discoveries of the preceding century, of the mathematical achievements of Descartes, Leibnitz, and Newton, and of the philosophical theories of men like Bacon, Descartes, Leibnitz, and Locke.

Now they began to undergo a very great transformation. The new humanism affected the universities just as it did the secondary schools, but yet the Latin tongue did not maintain its former position. It was no longer regarded as necessary for scholarly use. Professors generally dropped it and lectured in the mother-tongue.

A new thought, latent in the character of the university from the beginning, was now boldly asserted and accepted, at least in Germany. Grundling first uttered it. In a public dissertation at Halle he declared that the true office of the university is "to guide to the capability of distinguishing truth from falsehood . . . which is impossible if any limits are set to free investigation." He was the advance herald of many bold ventures in thought and investigation, for which the world is deeply indebted to the universities.

The greatest changes were wrought in the department of philosophy, and the man who of all most profoundly affected the trend of philosophic thought was

Immanuel Kant, of Königsberg. He performed valiant service for pedagogy, too, by taking kindly interest in educational reforms, theories, and experiments, and by delivering valuable and influential lectures on pedagogy in the university.

In this century, also, began a real intellectual awakening in Russia, and effective contributions were made to higher education. In it were established the Imperial Academy of Sciences and the Imperial Russian Academy.

In the American colonies, and in the Union after it was formed, conditions were not favorable to educational activity. This is especially true of the second half of the century. The French and Indian War and the War of Independence exhausted the people and resulted in

Growth in much confusion and uncertainty. Yet a
America. " surprisingly large number of colleges were founded,—twenty-two in the course of the century. The most prominent of these were Harvard, Yale, Princeton, the University of Pennsylvania, and Columbia.

There was an increase in the number of public elementary schools in the northern colonies and States, but little change in the studies and methods of teaching. New York, in 1795, appropriated one hundred thousand dollars a year for five years to aid the schools.

The most notable event of the century was the action of the national government with respect to education.

National The nature of its organization prevented it
School from establishing and controlling schools in
Legislation. the several States. Even yet national organization of education is apparently a matter of the very distant future. The cession of the Northwest

Territory, however, led to the adoption of a policy by which the nation has contributed very materially to the development of both elementary and higher education. The government of no other country has contributed so much.

In 1785 an act was passed setting aside the sixteenth section of every township in the Territory for public schools. A supplementary act, passed in 1787, gave to each new State to be formed out of the Territory two townships for a university. The policy was afterwards applied to all new territory acquired by the nation, when it was possible to do so. Thus the new States added to the Union started into existence with permanent school funds.

Washington advocated the founding of a national university in the District of Columbia. In his will he bequeathed fifty shares in the Potomac Company towards the endowment of such an institution. The project has been revived and discussed at different times since, but nothing definite has ever come of it.

HISTORICAL SUMMARY

Yale University founded	1701
Russian Imperial Academy of Sciences founded	1724
Rollin's <i>Treatise on Studies</i> published	1726-28
Teacher's Seminary founded at Stettin	1735
Pedagogical Seminar established in Göttingen University	1738
Princeton University founded	1746
Hecker's Real School opened in Berlin	1747
Hecker's Teachers' Seminary opened	1748
University of Pennsylvania founded	1749
Columbia University founded	1754

Rousseau's <i>Emile</i> published	1762
Normal School established in Vienna	1771
Philanthropin opened	1774
American Revolution begun	1775
Ludwig Höcker opened a Sunday-school	1740
Robert Raikes opened a Sunday-school	1780
United States Government set aside public land for schools	1785
United States Government set aside public land for univer- sities	1787
French Revolution begun	1789
New York appropriated one hundred thousand dollars to aid schools	1795

PART VI
THE NINETEENTH CENTURY
HUMANE EDUCATION

XXIV

CHARACTER OF CENTURY AND EARLY CHANGES

THE advancement of every form of educational effort in the nineteenth century was without parallel. This is particularly true of popular elementary education. Wonderful to contemplate are the depth and extent of the interest it claimed, the amount of money invested for its maintenance and promotion, the thought devoted to it, and the high character of the work which distinguished it. Interest in popular education, more than any thing else, created a science of education and imparted new dignity and enthusiasm to the teacher. After many centuries, teachers began to realize the true character of the mission bequeathed to them by the Great Teacher, and the work of the school-room became pervaded by the spirit of the Master as never before.

The educational progress of the century can be traced to many causes; but, beyond a doubt, the following are the principal ones:

1. *The American and French Revolutions.* These stirred society to its depth and gave a wonderful impetus towards the establishment of human rights and free government. In their train have followed the freedom of the slave in Christian countries and the extension of the right of suffrage. These have imposed the necessity of making education general as a means of protecting and

preserving society. But more than that, they have invested the individual with such dignity and importance that the people, as a whole, and individuals interested in their welfare, demand high-grade educational advantages for all.

2. *The unprecedented multiplication of inventions, discoveries, and manufactures, and the consequent extension and complication of commercial enterprise.* These have put a premium upon education by demanding and rewarding well a high grade of intelligence and training.

3. *The triumphs of the great scientists.* Since the first quarter of the century natural science has been recreated. The development of the theory of evolution has wrought a revolution in almost every department of human thought as radical as that of the Revival of Learning. By virtue of this vigorous influence, new sciences have been created and old ones regenerated. There is a new history, a new philology, a new philosophy, as well as a new natural science. Among the rest is a new psychology. It tests every nerve in the human body; it experiments upon every phase of human consciousness; it jealously watches every minute of child life lest it miss any manifestation of mental activity or any trace of a condition thereto; it questions ancestry; it studies the growing mind of the race in its myths, literature, and every other form of expression; it even searches into the mystery of animal intelligence; and all in order that it may give a complete account of mental functions, their history, conditions, and laws of development. Now all this has given a new meaning to the old terms "according to nature" and "realistic study," has revolutionized educational methods, and created a new pedagogy.

4. *The improved social position of women.* The extent to which legal and political rights have been extended to women, the preference given to them as teachers in many grades of school-work, and the numerous occupations of profit and honor opened to them, have given a powerful impetus to female education. It has not only led to the founding of many high-grade institutions for girls and women, but has also thrown open to them the doors of many that were originally intended for male students only.

The century opened with great promise. In 1802 England gave the first evidence, since the time of Alfred the Great, of state interest in elementary edu-
Introductory
Changes.
 cation. A law was passed restricting the labor of children in factories, and requiring that they be taught reading, writing, and arithmetic a part of each day. No provisions were, however, made for the instruction, so no practical good resulted. But two movements about this time in some measure did what the state failed to do.

In 1798 Joseph Lancaster, moved by intense enthusiasm for the instruction of the poor, opened a school for them in London. Its attendance soon grew
Joseph
Lancaster.
 from a hundred to a thousand. In order to teach so many with the limited means which came to him in the form of gifts or as tuition fees from those who could afford to pay, he hit upon the plan of employing the older and brighter pupils as assistant teachers. These assistants were called monitors. They were first drilled in the school exercises themselves by the head-teachers, and afterwards they taught their fellows the

same exercises. This school excited great public enthusiasm. The king, the nobles, and the gentry contributed liberally to the support of it and similar schools. Soon nearly every city in England had a Lancasterian school.

To help Lancaster financially, a society was formed in 1808. It assumed the title "British and Foreign School Society." It was soon obliged to push Lancaster aside because of his vanity and improvidence. The society was made up of Dissenters.

Dr. Andrew Bell had been a chaplain and teacher in India. While there, he learned the monitorial system from the Hindoo teachers, and employed it. He published an account of it in England in 1797. His friends claimed that Lancaster had taken the suggestion from this account. The adherents of the Established Church were dissatisfied with the Lancasterian schools because they did not teach the doctrines of the Episcopal Church. They formed the "National Society," and established monitorial schools, under the leadership of Dr. Bell, to promote the interests of their church among the poor.

Rivalry between the two organizations multiplied these schools very rapidly. The teaching in them was mechanical and poor enough, but they gave to England something more nearly approaching popular education than it had ever known before.

The most advanced steps of all in the interest of popular education early in the century were taken by Prussia. The peace of Tilsit, in 1807, left Germany. Frederick William III. crushed and humiliated and in possession of little more than half of his

former kingdom. He turned to education as a means of imparting new life and new glory to his country. On the basis of the decrees of Frederick the Great, he gave the educational work of Prussia a state organization. In its general features it was similar to that of the present time. Attendance at school was made compulsory. So Prussia led the way in making Germany the foremost educational country in the world.

In France the measures of the Revolution to promote elementary and higher education were rendered abortive by the unsettled state of affairs. Napoleon I. sought to bring order out of chaos. He France. devised a form of organization which has, with some modifications, continued to the present time. It was very compact, and its control was given to the state. All the schools and teaching bodies were made to constitute the Imperial University. Families and religious organizations had the right to establish schools, but were obliged to get license from the proper authorities in the university. Napoleon made no state provision for elementary instruction; but yet, when the demand for popular education came, the organization which he had instituted was in a position to comply effectively with it.

XXV

THE GREAT EDUCATORS

IN the year prior to the decree for the organization of the University of France there was opened at Yverdon, in Switzerland, a school that was for a time the most famous in the world. It was visited by statesmen, scholars, and educators from nearly every country in Europe and from America. It sent teachers to most of the important cities of Europe from St. Petersburg to Madrid, and at least one to America.

The founder of this school, John Henry Pestalozzi, was one of the strangest figures ever prominent in the school-room. He was ungainly of form, awkward in movement, slovenly in dress, and by no means handsome of countenance. He never had the training of a teacher, and came to the work but slowly and late in life. He never could adapt himself to the necessary routine of school-work, and was so deficient by nature and training in practical skill for the management of affairs, that the schools he personally founded and conducted eventually failed. But there was a great soul in the man, and his soul went into his work. No other man has so thoroughly stamped the impress of his personality and genius upon the growth of modern elementary education. He was born in Zürich in 1746.

Pestalozzi was extremely sensitive and had a lively imagination, a combination naturally unpractical. It was made more so in his case by early training. His mother, widowed when he was a little child, brought him up as a household tenderling; behind the stove, as he termed it. If men of his stamp are intense enough in feeling and purpose they make good reformers, and Pestalozzi was intense enough to be one of the noblest of all reformers. Once when elated at the pleased visit of a nobleman to his school, he struck a key with his arm in the impetuous movements of his enthusiasm. The blow bent the key, though it was half an inch thick, yet he never discovered that he had hit it until an hour afterwards, when he sought the cause of a painful swelling of his arm.

Temperament
and
Disposition.

He was an ardent disciple of Rousseau. It took him a long time to break away from some of the misleading theories made plausible by the latter's seductive eloquence. But Pestalozzi belonged to a very different order of men. He was, above all things else, a patriot and a philanthropist. He was a lineal successor of the early Swiss patriots and of the lovable yet heroic figures of the Swiss Reformation.

The best revelation of the man's innermost soul is found in a letter written to the lady of his choice, Anna Schulthess, whom he afterwards married.

The following is the substance of the letter: Pestalozzi's
Love-Letter.

"My dear friend,—I shall now reveal myself frankly to you, let you look as deeply into my soul as I am able to penetrate myself. I am improvident and incautious, and lack presence of mind in unexpected changes of prospect.

I may not conceal these defects from the maiden I love, though I may in some measure overcome them. I am extreme in praise and blame, and in my likes and dislikes. I am negligent in matters of etiquette and in all other things of little importance. . . .

“I must also confess to you that I shall always subordinate my duty to my wife to the duty I owe to my country. Though I shall be the tenderest of husbands, I shall always consider it my duty to remain inexorable to the tears of my wife if she ever seeks with them to keep me from the performance of my duty as a citizen. My life will not pass without important and critical undertakings. No fear of men shall ever keep me from speaking, if my country’s need commands me to speak. My whole heart belongs to my country. I shall risk everything to alleviate the misery and need of my people.”

The condition of the masses of the people appealed to him. It was miserable in the extreme. The nobles oppressed them, they were ignorant and superstitious, and, too often, thriftless, dissolute, and dishonest. As predicted in his letter, his whole life was dedicated to

their deliverance. He first thought to work
First Efforts. for their good as a minister, but broke down in his first sermon. He next turned to the study of law, in order that he might champion the peasants in the courts. He studied so hard that his health failed. He then conceived the idea that the poor lands of Switzerland might be made profitable by the cultivation of madder. Accordingly, he bought a farm to try the experiment. He built a house upon it, and called the place Neuhof,—New Farm. The madder culture was not

profitable, and his financial backers in Zürich withdrew their support.

When the farm failed, Pestalozzi, in 1775, began on it his career as a teacher in a noble way. He opened an industrial school. He gathered together about fifty poor children, whose labor was to pay for their instruction and maintenance.

The Industrial
School at
Neuhof.

He taught them to work on the farm in summer, to spin and weave in winter. He taught them also the use of language, singing, and the reading of the Bible. This was a forerunner of many similar institutions that have since blessed humanity, but it was not successful. Pestalozzi was injudicious in his grading of the work in weaving, and the parents and children returned his benevolence with ungrateful dishonesty. The children were often withdrawn from the school after receiving a new suit of clothes for which they had as yet given no return. In five years the experiment ended in disastrous failure. It had cost his wife's money and left him heavily involved in debt besides.

In the eighteen years that followed the failure of the industrial school, Pestalozzi was engaged in a melancholy struggle with poverty. Often at meal-time there was scarcely a crust in the house. In this time he won fame as an author. In 1780 he published *The Evening Hours of a Hermit*, and the next year *Leonard and Gertrude*. In the former work he put into aphorisms all the best things advocated in pedagogical literature since the time of Comenius. To what extent he borrowed from others is hard to tell; but, whether much or little, all was stated in his own inspiring

First Efforts in
Authorship.

way and made alive with his sweet and generous spirit.

Leonard and Gertrude is a realistic story of the Swiss peasant life that Pestalozzi thoroughly knew and pitied.

Leonard and Gertrude. The numerous characters of the story are clearly drawn and life-like. Ignorance abounds in the village, drinking, laziness, superstition, dishonesty, trickery, and gossip are as prevalent. The village is transformed by the efforts of the good magistrate Arner and the influence of Gertrude. By means of her good sense and devotion the latter works a reform in her rather weak, drinking, and gambling husband, and obtains good employment for him from Arner. She teaches her own children spinning and other home industries, maxims, hymns, prayers, cleanliness, honesty, and good manners. She carefully trains them in language and numbers by means of their other exercises, skilfully weaving all into natural and inspiring relation. After a time the children of a neighbor are permitted to receive training with her own. When eventually Arner opens a village school, it takes its character from the principles and methods of Gertrude's home school, and Arner and the teacher both seek her advice.

Other works followed this, but none of them were really successful. This was. It presents Pestalozzi's idea of social reform and the general features of his future educational system. Its scenes are some humorous, some pathetic, and all instructive. It has done much good. It is pitiful to read that when the government of Berne presented the author a gold medal he was obliged to sell it for bread.

In 1798 Stanz was burned by the French. A revolutionary republic had been established in Switzerland in the social upheaval consequent upon the French Revolution. Pestalozzi was in sympathy with the new government. The ravages of the war left many poor and orphaned children at Stanz. He received an appointment to open a school there. A part of an unfinished Ursuline convent was assigned to the school. With one housekeeper, Pestalozzi made his home there in charge of about eighty children. They ranged in age from four to ten. They were ragged and dirty. He undertook to be at once father, mother, and teacher to them.

Stanz.

As at Neuhof, he combined manual training with teaching. There were lessons from six to eight in the morning and from four to eight in the evening. The intervening time was devoted to labor. There were no books, and scarcely a child knew his letters. To accomplish as much as possible, Pestalozzi devised concert exercises, as had been done in the schools of the Christian Brothers before, and a monitorial system similar to that employed by Bell and Lancaster afterwards. Having no books, he taught things. Number lessons and language lessons were based on the study and handling of objects, and geography and natural history were taught in conversational exercises. The reading lessons were combined with writing.

Methods at
Stanz.

Pestalozzi could not give the children special religious instruction, because they were Catholic and he was Reformed. As occasion offered, he taught them the practical exercise of Christian virtues. He prayed with them

night and morning, wept with them when they were sad, laughed with them when they were happy. By the depth of his sympathy and the energy of his enthusiasm he accomplished astonishing results in a short time, but at the expense of his health. Before a year had passed the French returned and used the building as a hospital. This closed the school and saved him from complete physical collapse.

For a time, after that, Pestalozzi was assistant teacher at Burgdorf. He was soon dismissed, partly because of inability to adapt himself to the routine of school work, but mainly because of the jealousy of the head-master. This was due to the strong hold he gained upon the affections of the pupils and the success of his work in spite of its irregularity. With a strong corps of teachers devoted to him and his methods he opened a private school there that became successful and famous. At this time he published *How Gertrude Teaches Her Children*.

Pestalozzi was obliged to give up the building at Burgdorf for government use, and in 1805 he established his school in an old fortress at Yverdun. There the eyes of the civilized world were turned upon him. Teachers came to him to learn their profession anew and statesmen to find in his system a new source of life and vigor for their countries. At last all his ideas had an opportunity to take form in practice, and different departments of school work were developed in harmony with his views by skilful teachers.

Nearly every feature characteristic of the methods employed in our elementary schools to-day was tried in the

school at Yverdun. Pupils learned numbers by numbering objects. They developed mastery of language by conversing and writing about things which were brought under their observation. They studied birds and trees and flowers ; and, under supervision, drew pictures of them, and talked and wrote about them. They made excursions into the country for health and observation. They studied the valley of the Rhone, and modelled its structure with clay carried back from it. They were introduced to the study of geometry by cutting out or modelling geometrical figures. It was from Yverdun that the new schools of Prussia and other parts of Germany took their form and drew their spirit.

Pestalozzi seemed at last to be on the highway to success and fortune, but dissensions among the teachers weakened the school, and finally broke it up. It was closed in 1825, and, two years after, its founder's life went out in disappointment and sorrow.

It is easy to see that Pestalozzi, like Comenius, believed in education as a primary means of regenerating society, that it reaches society through the individual, and that it means for the individual the pro-
Review.
motion of a natural development. "Sound education," he said, "stands before me symbolized by a tree planted near fertilizing waters. A little seed, which contains the design of the tree, its form and proportions, is placed in the soil. See how it germinates and expands into trunk, branches, leaves, flowers, and fruit ! The whole tree is an uninterrupted chain of organic parts, the plan of which existed in its seed and roots."

He believed that intellectual growth has its basis in

direct observation, in the proper use of the senses. He sought to use language, drawing, and modelling as actual forms of expression for thoughts and feelings already acquired. "We learn to do by doing," the proposition first formulated by Comenius, he accepted, but gave it a wide range of application. He was convinced that to lead a child to perform a virtuous act cheerfully is worth more than a learned discourse on the subject of virtue. At Stanz he persuaded the children to make a sacrifice for similarly unfortunate children in another district by reminding them of what had been done for them.

He carried his analysis of school work to extremes. Object-teaching was to result in a knowledge of form, number, and speech. These he reduced to their elements, and insisted on having children drilled in them. He wanted elementary sounds repeated by the mother to the baby in her arms. He also had an exaggerated notion of the resemblance between the school and the home. He endeavored to introduce the relations and methods of home into the school, and those of the school into the home. He tried to so simplify the primary work of the school that mothers, as the best teachers for the child, might easily apply the methods at home. Out of these efforts grew the Kindergarten.

To the ideas and work of Pestalozzi must be attributed also the normal school as we know it now in the United States. It differs radically from the earlier institutions designed to prepare teachers. They were, in the strictest sense, training schools, inasmuch as all they sought to accomplish was to make teachers skilful in certain fixed methods of teaching the different branches and of main-

taining discipline. Sometimes they were little more than reviewing schools.

Other men have been able to think more systematically and comprehensively on education than Pestalozzi; it is probable that not a single one of his main ideas was entirely original with him; but yet he is the prince among modern educational reformers. With unsurpassed breadth of philanthropic spirit he seized upon every vital idea that had yet been advocated for the reform of education. What had been thoughts and ideas to others became more to him: they became the enthusiasm of his soul. He was willing to dedicate his life to them and to make sacrifice for their realization.

A disciple of Pestalozzi's supplemented his work. This was Friedrich Froebel. He was born in a village in the Thuringian forest in 1782. He founded the Kindergarten,—Garden of Children. This is an institution that has made its founder immortal.

Froebel
and the
Kindergarten.

It is valuable and important not only in itself, but also because of its effects upon the lower grades of schools and upon the home life of children. Wherever its influence has extended, it has beneficently modified the spirit and exercises of the former and has made the latter more delightful and wholesome.

Froebel was neglected in childhood. His mother died when he was an infant. His father, a Lutheran pastor, amid the cares of a large parish had little time for him.

The new mother, who came in the course of time, had the proverbial stepmother's affection for him. In after years the memory of his early neglect and abuse awakened in his soul a tender

Formative
Influences.

regard for childhood and a passionate love for children.

A maternal uncle took him at the age of ten and sent him to school in Ilm. He entered on a Monday morning. It was customary at that time to require the pupils to repeat on Monday the text of the previous Sunday's sermon. The text repeated by the children this morning was, "Seek ye first the kingdom of God." The school otherwise seems to have done him little good, but this text made a wonderful and lasting impression on his little mind; it remained with him a living and fruitful remembrance.

His father's house was closely shut in, and the clear mountain sky above it early won his attention. When his freedom from restraint brought him into contact with the natural scenery about him, he developed, as had Rousseau, an intense interest in nature, a love for plant and flower. This was increased by subsequent experience. At the age of fifteen he was apprenticed to a forester, with whom he remained two years. The forester gave him little attention, leaving him with the trees and his books, mainly botanical works. Froebel studied both industriously. The love of nature became with him a religion. By and by there was formed in him a ruling belief in the unity of nature, a unity of all things, because of their unity of origin and life in God.

Froebel spent a short time at the University of Jena, and then drifted from place to place with frequent change of occupation. At last his true mission found him while a student of architecture in Frankfort-on-the-Main. One of his friends in

Finding his
Mission.

Frankfort, named Gruner, was the director of a model school. This man had learned much of the method and imbibed much of the spirit of Pestalozzi. He became intimate with Froebel, and one day told him that he was a born teacher and could have a position in his school. Froebel accepted it, and was happy through two years of labor there. In 1807 he went with three private pupils to Pestalozzi's school at Yverdun. Here he was both pupil and teacher. He became warmly devoted both to the man and to the method, accepting all Pestalozzi's principles with enthusiasm.

Froebel left Yverdun with his life dedicated to teaching. He was filled with new ideas and theories. He determined to renew his university studies in order to fit himself more thoroughly for his work. His studies were interrupted by service in the Prussian army against the French. Over the camp-fire the ever-recurring theme of his talk was education, and two of his soldier companions, Langenthal and Middendorf, became devoted to his theories. After peace was declared, they all, together with Barop, a relative of Middendorf's, married and formed an educational community at Keilhau, in Thuringia. These champions of a new education struggled with poverty and disappointment for years so valiantly that at last their school was successful, and they planned branch institutions.

Keilhau and
Burgdorf.

One of these branch institutions Froebel opened at Burgdorf, where Pestalozzi had been before. Two notable events are connected with this school. The canton required its elementary teachers to spend three months every alternate year at Froebel's school to observe the

work and receive instruction in principles and methods. Here, too, Froebel admitted to his school children from four to six, planning for them a graded course of exercises based on the games in which they delighted most. This was the beginning of the Kindergarten, though that institution was neither fully developed nor named here.

Froebel opened the first fully-organized Kindergarten at Blankenburg, near Keilhau, in 1837. He himself invented the name. We have already seen ^{The} Kindergarten. what importance Comenius and Pestalozzi attached to the mother's office as teacher, and what they expected her to contribute to the child's development. Froebel was familiar with the opinions of both. He agreed with them, but recognized the fact that, because of the lack of time and preparation on the part of the mothers, there must necessarily remain a gap between the best training of the home and that of the first school grade. To bridge this he devised the Kindergarten.

Froebel observed that children are characterized by restless sense alertness, that they have great physical activity combined with fondness and taste ^{Its Basis.} for construction, are eager for personal ownership, and are fond of company. Influenced by a peculiarly involved and mystical philosophy, which he himself could never formulate with any great degree of clearness and which an American can scarcely understand at all, and guided by his observations of children, he devised a number of gifts and exercises adapted to the natural endowments and activities of children. His object was to so direct and systematize play that it should

contribute the highest possible results to the development of the individual and the race.

The gifts, as Froebel originally devised them, were five,—the ball, the sphere, the cube, the cube divided into eight rectangular parallelpipeds to teach similarity and dissimilarity, and the cube divided into twenty-seven equal cubes with some of them divided into prisms. The divided cubes were to be used as building-blocks. The choice of the ball for the first gift illustrates the application of his mystical philosophy. He expected it to exercise a peculiar influence on the child's mind because it is the symbol of unity. After a similar manner of thinking the cube was selected to represent unity in variety.

The Gifts.

To these gifts Froebel added others, as thin strips of wood, little sticks, and colored papers. These were to be used in construction exercises. The children were put to forming figures with these sticks, to paper-folding, paper-dotting, mat-weaving, drawing, coloring, and modelling. He also tried to give each child a plot of ground to cultivate as its own.

Occupations,
Games,
and Songs.

He also devised movement exercises to be accompanied with suitable songs. The most popular book he ever prepared and published was his *Mother Play and Nursery Songs*, containing such songs and exercises with explanations.

In the course of a few years the Kindergarten at Blankenburg began to fail from lack of funds. Froebel had little more capacity for handling money than Pestalozzi. He finally closed the Kindergarten and opened an institute for the instruction of young

Further
Activity.

teachers. He also lectured in the large towns. The last four years of his life were spent at Liebenstein in the Thuringian forest. Here he did great service by devoting himself to the training of women as educators. Among the famous women who came under his influence there was the Baroness von Marenholtz-Bülow. She became a powerful champion of the Kindergarten, and has published the best account of Froebel's life and work.

Froebel expected the German government to adopt the Kindergarten. He was, however, disappointed. Because of the writings of Karl Froebel, a nephew, the uncle also became subject to the suspicion of being irreligious and a socialist. The suspicion was not well founded, but yet, in 1851, the government of Prussia forbade the establishment of schools governed by Froebel's principles. The interdict was not removed until 1860.

Froebel's greatest literary production is the *Education of Man*. It contains the most comprehensive statement of his general philosophy and of his educational principles and methods, though it was written before the methods had received their complete development. It reveals at once profound thought and remarkable pedagogic insight and skill.

The fundamental thought set forth in the book is that an eternal law rules and operates in all things. This law finds expression outwardly in physical nature, and inwardly in the spirit. Beneath this all-pervading, all-powerful law lies God as a single omnipotent cause. This law, like its cause, is Godlike. The essential life,

or individuality, of everything is the divine principle working in it. The destiny of everything is to develop and exhibit this divine principle. The proper vocation of a man is to grow conscious of and win a clear insight into his divine nature, and to develop it in practice in his life. To educate a man is to provide in unbroken continuity the ways and means to bring him into consciousness of himself and to incite him to the conscious practice and fulfilment of the inner divine law of his being. In other words, education is the promotion of a natural process of evolution, or development.

The child in its development, from the very beginning, comes under the influence of three powers, nature, animate and inanimate, humanity, and God. God energizes his whole being and pervades all nature and humanity. Self-activity in response to this threefold activity is the basis of the child's development. Physical movement develops the body; color and form, the eye; music, the ear; the satisfaction of the spirit of inquiry, the intellect; cheerful fellowship with others, the heart and the moral life. Play is the natural form of a child's activity, and constructive exercises are the most intelligent and fruitful forms of play. Creative activity is necessary to the assimilation of knowledge and growth of power. It is the expression of self, and self is completed in expression.

The ideas which gave rise to the Kindergarten have been fruitful otherwise. Froebel carried the idea of activity as self-expression much farther than Pestalozzi. He declared that a child should be taught to express everything that he learns, and be made skilful in as many forms of expression as possible.

Review of
Services.

He found a value peculiar to itself in each different form of expression.

This theory has extended its influence through many grades of school work, and accounts for much of the stress now laid on composition, drawing, modelling, and manual training, and the uses to which they are put. His work also has given a new importance to women as teachers, and so increased the usefulness of womanhood. He put a new hand of blessing on the head of childhood, and his noblest monument is the Kindergarten.

Another man ranks by the side of Pestalozzi and Froebel in pedagogical leadership. This is John Frederick Herbart, born in Oldenburg, Germany, in 1776.

Herbart.
1776-1841. In scholarship and training he was clearly distinguished from the other two of the trio. He was the son of cultured parents. After receiving careful private instruction and passing through the gymnasium, he took thorough university courses. He studied philosophy under Fichte at Jena. He became one of the most noted psychologists and philosophers of his time, and in 1809 was called to the chair of philosophy in the University of Königsberg. This was the position that had been held by the great philosopher Kant.

Before Herbart had completed his university studies, he was for a time private tutor in Berne, Switzerland.

Early
Pedagogical
Experience. This intensified the interest he had already felt in education. He placed himself in communication with Pestalozzi and made himself familiar with the latter's ideas. His first published works were efforts to give scientific formulation to the ideas

which he found in the earlier writings of Pestalozzi. His treatise, *Pestalozzi's Idea of an A B C of Intuition*, was a work of special importance. It gave a great impetus to pedagogical investigation. It was the beginning of the author's efforts to develop a complete science of education, efforts that have been productive of good results.

In addition to his lectures on philosophy at Königsberg, he established there a pedagogical seminary. He opened a model, or practice, school in connection with it. He taught in this every day before his students to illustrate his principles and methods. After a time the students were also required to teach, and their work was subjected to criticism.

The
Pedagogical
Seminary.

The supreme end of education, Herbart thought, is the making of a religiously moral man. To accomplish the desired result, there must be training and instruction. The first aim of instruction must be to produce a deep and many-sided interest. There are two kinds of interest, interest in knowledge and interest in participation. The latter consists of social and religious interests. A knowledge interest is pleasure derived from the act of acquiring knowledge coupled with a desire for its repetition. A person, for instance, has interest in history when he not only has satisfaction because of what he already knows, but also has an appetite for more.

Fundamental
Ideas.

The cause of interest in knowledge is *apperception*, the interpretation of new experiences in terms of old. A child finds something that seems entirely new. He is puzzled and bewildered by it; it does not attract him.

If, however, he discovers something familiar in the new, the discovery gives him pleasure, and he links the new to the old. The fact of apperception is vital in teaching, and, together with the child's present and future relation to society, makes the true teacher respect his pupil's individuality.

Though the child's interest must be many-sided, yet there must be unity and system in instruction. There must be a proper *sequence* and *co-ordination*, *correlation*, of what is to be learned. Instruction must complement experience and intercourse, and so, also, must training complement instruction. It must call into exercise judgment and will.

Herbart has many followers, especially in Germany and the United States. There are two schools of Herbartians in Germany,—the Stoy school, close interpreters, and the Ziller school, free interpreters of Herbartian propositions. His followers of both continents have given rich and varied development to his fundamental ideas. Whatever objections may be advanced on psychological and philosophical grounds to the theories of apperception and correlation, it is still true that it would be very difficult to find two other theories equally fruitful in pedagogical activity and results of a high order.

In 1839 Rosmini-Serbati, a brainy, learned, and pious Italian priest, began a work, never completed, on *Method in Education*. It presents a theory closely resembling the natural development theory of Froebel, and as closely resembling the apperception theory of Herbart with its concomitant ideas of

Schools of
Herbartians.

Rosmini-
Serbati.

interest and moral development. He fails of a place in historical importance by the side of Froebel and Herbart only because, for a number of reasons, his work has not entered as an equally effective factor into the development of present educational theory and practice.

XXVI

GROWTH OF PUBLIC ELEMENTARY EDUCATION

It was characteristic of the social systems of the olden time to sacrifice the individual to the organization. The more ignorant and helpless the man was, the more completely he was suppressed and the more ruthlessly his claims to a man's right were trampled upon. The tendency in the advanced civilizations of to-day is to sacrifice the organization for the individual, to use the machinery of government to lift up the man, increase his opportunities, and otherwise promote his interests. In nothing else has this tendency been so clearly manifest as in the general effort to put a good education within the reach of all, nearly or quite at the public expense. In nothing else did the civilization of the nineteenth century prove itself more beneficent, and the beneficence has already been justified in its results. The increased interest and participation of the masses of the people in the general life of the world, their increased productiveness, dignity, and comfort not only warrant what is now done, but also constitute a sufficient and urgent claim for broader and more generous effort in the future.

The initiative taken by Prussia early in the century was rapidly followed by nearly all the other German states. The compulsory laws adopted by one state after another and the efforts made to increase the extent and

improve the character of school-work have been remarkably successful. Almost no other lands can show similar results. In most of the German states illiteracy has been reduced to a fraction of one per cent., and in some states the fraction is exceedingly small. As early as 1877, out of six thousand recruits furnished the army by Würtemberg only one was unable to read and write.

Germany
and Kindred
Countries.

The elementary schools are called Volksschulen,—the people's schools. They are open about forty-two weeks in the year. Attendance is compulsory from six to thirteen or fourteen. The most serious defect of these schools is that they are not articulated with the secondary and higher schools. Pupils who desire to prepare for professional life must leave the elementary schools at eight or nine and enter some secondary school. There are, however, continuation schools for pupils who wish to review their studies and continue them. In the country these schools are open in the evening and on Sunday. In the cities they form a higher citizen's school, and French, English, and sometimes Latin, are added to the course. The elementary schools are now nearly or quite free.

In their main features the schools of Switzerland, Holland, Denmark, Sweden, and Norway closely resemble those of Germany. In Norway the authorities furnish text-books, and even clothing in case of need, in order to insure attendance at school. In 1881 the percentage of illiterates among army recruits in Denmark was .36, and in Sweden .39.

In Austria the public schools are left almost entirely

to the support of local authorities. Though the Austrians have done well, they have not kept pace with their neighbors in Switzerland and Germany.

Prior to 1833, in spite of all efforts at educational reorganization consequent upon the Revolution, elementary instruction in France was left practically France. to the religious orders and to private enterprise. At the beginning of the Revolution the Christian Brothers had come to be a thousand in number, though not all were engaged in elementary teaching. The Order survived the Revolution. Considerable elementary instruction was given, too, by the sisters in convents. Still, the inadequacy of all the efforts of church organizations may be inferred from such statistics as are accessible. In 1790, in the diocese of Rouen, by no means one of the most illiterate in France, fifty-three per cent. of the men who were married and seventy-three per cent. of the women could not sign their names to the marriage contract. As late as 1873, according to government reports, more than thirty per cent. of the whole French population was entirely illiterate.

In 1833, when Guizot was minister of public instruction, the state began to participate seriously in the extension and control of elementary education. The law decreed that there should be a school in every commune, or in a group of two or three in case of sparse population. The state reserved the right to appoint the teachers and to fix salaries. Poor children were to be excused from paying tuition fees. The law accomplished great improvement, and was revised in 1850. The war with the Germans in 1870-71, with its crushing and humiliating

defeats, aroused the French to energetic interest in education. Great and rapid advances began immediately. In 1882 education was made free and compulsory for both sexes between the ages of six and thirteen. No other country in the world now has such a thorough and comprehensive organization of schools. In 1895 ninety-one per cent. of all the children of school age attended school regularly.

Of all the Protestant countries of Europe, England was the slowest to develop a live interest in popular education. The predominance of the aristocratic element in its social system largely accounts for this. For many years the Sunday-schools and the monitorial schools of the National Society and the British and Foreign School Society had an almost complete monopoly of elementary instruction. A change began in Great Britain
and Ireland. 1832, when Parliament appropriated twenty thousand pounds for elementary education. In 1839 the appropriation was increased to thirty thousand pounds, and a special educational committee was established. In this year, too, inspectors were appointed to exercise government supervision of the schools. In 1846 was adopted the method of employing apprentice teachers, suggested by the monitorial system, and training schools were established. Statistics of the previous year had shown that only one person in six could read, and one in fifty cipher as far as the rule of three.

In 1870 Parliament enacted a law which really nationalized elementary education. It did not take away schools from the control and support of churches and religious societies, but imposed certain conditions that

must be complied with by schools so controlled to entitle them to receive parliamentary grants of money. It provided also for the erection of schools for all children of school age not attending schools already established, these schools to be maintained in part by local taxes and in part by state grants, to be unsectarian, and to be under the direct control of locally elected school boards. These schools are known as board schools, to distinguish them from the distinctive church schools, which are known as voluntary schools because they are so largely supported by vested funds and voluntary contributions. The law also required the local authorities to compel the attendance of all children of school age, from five to fourteen. Few, if any, of the schools were then made entirely free.

The school law of 1891 sought to make elementary education as nearly free as possible. It decreed a government grant of ten shillings for every child of school age in average attendance. In many cases this supplement of local support is sufficient to make tuition free. The compulsory law is also enforced with strictness. In 1896 the average attendance was eighty-five per cent. of the total enrollment. In England and Wales about two-thirds of the children attend voluntary schools and receive special religious instruction. The remaining third attend board schools.

In Scotland the nationalization of the schools does not seem to be so complete as in England, but educational interest among the people is strong. The schools of Ireland were nationalized in 1831 on the basis of common secular instruction and separate instruction in

religion. The grants have never been sufficient to make the schools free, and the attendance is poor. In 1881 forty-one per cent. of the people were unable to read and write.

Shortly after the organization of the present Italian state, the government turned its serious attention to the problem of educating the masses of the people. They had, in this respect, been most woefully neglected. In 1861 about eighty per cent. of the people could not read. The efforts of the government to extend popular education were so far successful that in 1879 fifty-two per cent. of the men who were married could sign the marriage contract and thirty per cent. of the women. In 1877 a law was passed making elementary education free and, as far as possible, compulsory. The modification of the compulsory clause in the law was due to conditions existing in certain localities.

Other
European
Countries.

Spain has had a compulsory law since 1857, but it is inoperative. At the present time nearly seventy per cent. of the people are illiterate. Of all the Christian countries of the world Russia stands lowest educationally. Though there has been of late awakened interest in popular education, not more than two per cent. of the people attend school. Hundreds of villages, and even towns of considerable size, have no schools at all.

In America the promises made to the future by the early interest in popular education displayed by the colonies have been abundantly fulfilled. In no other land is there expended so much money for public instruction, and in no other land is there manifested such

a universal lively interest in education. The example set by the general government in providing permanent school funds for the new States to be cut out of the national territory was promptly followed by the older States for themselves. Three States only, Rhode Island, Vermont, and Pennsylvania, have no funds of this kind. They supply the deficiency by making liberal annual appropriations. That of Pennsylvania now is five and a half millions.

School Funds in the United States. Connecticut anticipated the action of the national government. As early as 1733 this State set apart, while still a colony, the public lands in its northwestern portion for a school fund. In 1795 it added to the fund one million dollars acquired by the sale of the Western Reserve in Ohio. New York, in 1786, set apart two lots in each township of unoccupied lands for the same purpose, and in 1801 added to this the proceeds of half a million acres of unoccupied lands. Tennessee made grants of land for both elementary schools and higher education in 1806, and Virginia established a "Literary Fund" in 1810. South Carolina followed her example in 1811.

Some of the States partly based their funds on taxes collected from banks or on the profits of State banks.

The national government has also further increased its contributions to popular education. In 1836 a surplus amounting to about thirty millions of dollars was distributed among the States. Most of the States added all or part of their share of this money to their school funds. A law, in 1848, added the thirty-sixth section to the sixteenth of every township of government land

to be set aside for school purposes. Special grants of swamp and salt lands have been made to different States, and a percentage of the money accruing from the sale of public lands has been turned over to the States in whose borders these lands were located.

The liberality of the national and State governments was fathered by patriotic leaders of thought, the architects of our national life; but the growth of elementary education was not as vigorous as desired. The response of the people to these efforts was not commensurate with the enthusiasm of their promoters. Schools made free of tuition by means of public support were regarded as pauper schools. Some of the State funds, as was the case with the "Literary Fund" of Virginia, were specifically established for the benefit of the poor. The very people for whom free schools were supported and for whom fees were remitted in other schools were unwilling to take advantage of this liberality. They were too proud to subject themselves to the imputation of poverty involved in having their children schooled under such conditions. The free schools, as a consequence, did not assume their proper State Organization. dignity and effectiveness until elementary instruction was taken under State supervision and was made free for all.

In this New York led the way. In 1795 the schools of the State were placed under the control of local trustees and commissioners, who were required to report to the secretary of state. At first the act applied to towns and cities only, but was extended to country schools as well in 1812, and the office of State Superintendent of

Common Schools was created. The fees were yet not altogether remitted, and the State superintendency was afterwards abolished, to be finally restored in 1854. Soon after, the schools were made entirely free. With varied experiences, the other States followed the example of New York. The permanent establishment of State free schools dates back in Pennsylvania to 1834, in Michigan to 1836, in Massachusetts, Ohio, and Kentucky to 1837, in Connecticut and Missouri to 1839, and in Iowa to 1841. In the South the organization of free public instruction was retarded by the peculiar social conditions until after the Civil War. Free public instruction is now universal in the United States, and in many of the States attendance is compulsory.

In 1897-98 the United States expended upon its public schools nearly two hundred million dollars, two dollars and sixty-seven cents per capita of population. This is more than twice as much per capita as is invested in education annually by any other country in the world. The public school enrolment in that year was 20.68 per cent. of the whole population, a percentage unequaled anywhere else. There is a world of encouragement in these figures. The large attendance and the fact that more than sixty-seven per cent. of the vast sum expended was derived from local taxation, indicate that the schools take their life from the people themselves. Though in many respects they reveal serious defects, even when compared with the schools of other progressive countries, they yet are characterized by an unrivaled vigor and breadth of spirit that promises great things for the future.

When measured by the percentage of illiteracy, the United States does not rank as high, educationally, as the Scandinavian countries, Germany, or Switzerland. The mixed character of the population is mainly responsible for this. Nearly one-half the illiterates of the country are colored. Among the white population the larger number of illiterates is found among the immigrants from countries intellectually low. Amongst the native white population, Massachusetts has the lowest percentage of illiteracy. In the census report of 1890 it was only .8 per cent. In New Hampshire it was 1.5; in California, 1.7; in South Dakota, 1.2; and in Kansas, two per cent.

Illiteracy in the
United States.

The new State systems of public schools in the United States did not take form without strenuous efforts made by able, generous, and patriotic men. The most influential of these was Horace Mann. Education, like religion, wins devotees who consecrate lives of heroic sacrifice to its service. Among men so won, Mann ranks as one of the best and noblest.

He was born in 1796, in Franklin, a little town in a very poor district in Massachusetts. His parents were poor, and he lost his father at the age of thirteen.

Early Life of
Horace Mann.

Early in life he broke down his health with hard manual labor. In his boyhood he got a few weeks of schooling in the midst of winter, never more than ten weeks in any one year. When twenty years old he was inspired to enter college. Six months after he commenced the study of Latin and Greek he was admitted to the sophomore class in Brown University. Though he was obliged to teach in the winter to help

pay his way, he graduated at the head of his class. Out of his own struggles and hard experiences arose the passionate eagerness with which he afterwards strove to make possible a good education for all the boys and girls of his native State.

After teaching Latin and Greek for some time at Brown, he was admitted to the bar. He was eminently successful as a lawyer, and was elected to the State legislature in 1827. In 1837 an effort was made by the legislature to reorganize and revivify the public schools, and the State Board of Education was established. Mann was then president of the senate. The executive office of the board, the secretaryship, was offered him. He at once resigned his presidency and turned his back upon the brilliant prospects of his profession to accept the office. He filled it twelve years.

There is a fascinating interest in the story of Mann's secretaryship. How he endured the labor nobody can tell. There seems to be the power of vitality in lofty purpose. For years he had been suffering in health and threatened with consumption, yet fifteen hours a day was the usual measure of the secretary's work. He had profound faith in the public school. He regarded it as the greatest institution ever devised by man. He believed that the capacity of children for growth in intelligence, purity, truthfulness, useful activity, and self-direction constitutes an undeniable claim to a generous education, and that the property of the State is pledged to provide it.

He went from one end of the State to the other, into large towns and obscure villages, seeking to call together

the people and waken in them an interest in their schools. He appealed to them with the power of his high-strained, impassioned eloquence. Sometimes after sweeping a room and building a fire himself in severe winter weather, he could get but a handful of people to listen to him. But nothing daunted him. He found people indifferent and inert, but he left them ambitious and enthusiastic. To supplement these efforts and increase the scope of his influence he founded and published the *Common School Journal*.

He wrote a series of annual reports that have become classics in American pedagogical literature. He covered in them the whole ground of public education. He discussed its beneficent results, school architecture, school organization and supervision, text-books, and methods of discipline and instruction. One of the reports was written after a visit to Europe and a study of the schools there. It presented a comparative study of European and Massachusetts methods, not much in favor of the latter. With remarkable clearness of insight he foresaw the possibilities of the public school. With rare judgment he seized upon all that was in his day best in education, and presented it to legislators and people, generally in a style clear, forceful, and beautiful. Some of the reports, notably the one on foreign schools, plunged him into spirited controversies with the Boston schoolmasters. All the reports attracted wide attention and made a deep impression. The New York legislature printed eighteen thousand copies of one for free distribution. The British Parliament reprinted another, and the German government distributed translations of several.

Annual
Reports.

Horace Mann, too, was the father of the normal schools in the United States. Influenced by him, Edmund Dwight, of Boston, offered ten thousand dollars to erect one, provided the State would furnish an equal sum. As a result, the first normal school in the United States was opened at Lexington, July 3, 1839, and another at Barre in September. To aid in furnishing one of the schools Mann sold his library, and he mortgaged his property to complete two of the buildings. Years afterwards, when his pecuniary sacrifices for the schools became known, the legislature unanimously voted him a large sum of money to reimburse him.

After serving four years in the United States Congress as the successor of John Quincy Adams, Mann accepted the presidency of Antioch College in Ohio. He died in 1859. The last words upon his lips were "Man, God, duty."

As determined by the ends sought, there must be two general kinds of elementary education: elementary training preparatory to higher education, and elementary training designed primarily to meet the practical demands of those unable to continue their studies through the higher courses. It is the latter that is generally spoken of as elementary education in works on pedagogy. Under certain conditions the two may and do coincide.

The public elementary school of to-day, wherever established, occupies the place relatively of the old parish school. It is a vast improvement upon the latter both as an agency for the increase of knowledge and as an aid to the development of faculty. In spite of the fact that

Comenius had mapped out an elementary course nearly like that common at the present time, most schools adhered to the limited course of the previous century until well into the nineteenth. The catechism was committed to memory, pupils were taught to read and write, and they learned a little arithmetic. In Protestant schools the Bible was the common reading book. There was no extensive course in reading, no study of history, geography, or natural science. Arithmetic very generally was taught orally and the exercises were memorized. What a marvellous change has taken place! In public elementary schools, almost universally, and in many parochial schools as well, the course embraces at least reading, writing, drawing, modelling, arithmetic, geography, history, civil government, and grammar. To these studies are generally added natural science, physiology and hygiene, and gymnastics. The term reading now covers a considerable course in literature. In France, gymnastics and military drill form a regular part of the training.

Improvements
in Courses of
Study.

In 1868 Finland made wood-work compulsory in the schools. Most likely at the suggestion of Finland, Sweden and Denmark also soon took up manual training. It is rapidly finding its way into the schools of America. But France has done more for it than any other country. In the French system a regular course in manual training begins with the first year at school, and ends with wood- and iron-work the last year.

In all countries except France and the United States the religious instruction remains in the schools and forms a prominent part of the work. In the United States

the old type of religious instruction is impossible in the public schools because of denominational differences. In France it was taken out of the schools to keep them from church control. The schools are closed on Thursdays, however, to give the children opportunity to receive religious instruction in churches.

The changes in the courses of study and other exercises are not greater nor more radical than the changes ^{Improvements} in methods. These changes are largely due ^{in Methods.} to the influence of Pestalozzi, Froebel, and Herbart, and in some measure also to the reflex influence of the changes in the character of the work in the universities.

Nothing better illustrates the revolution in methods than the changes that have taken place in teaching reading. Formerly pupils were taken through a monotonous course of alphabet teaching and spelling, and after a year or two of this were entered in a race for superiority in accuracy and rapidity of word recognition and pronunciation. The range of performance was very limited, and the exercises were vastly improved when they were converted into very mechanical elocutionary efforts. A number of interesting and effective modifications of word and phonic methods and combinations of them have succeeded this, and reading has become primarily a study of literature adapted to the intelligence and taste of the pupils. It is no longer a mere matter of glib pronunciation, but a matter as well of question and answer, and illustration with picture, story, and parallel fact or occurrence. It is a common thing to require oral or written reviews of lessons, sketches of the authors, and

even original illustrative drawings. In addition to this, systematic reading of suitable authors, even in the lower grades, is becoming common. The reading books generally contain well-chosen literary productions of a high grade, and are masterpieces of book-making, beautifully and helpfully illustrated, well-nigh as beautiful and interesting to look at as to read.

Numbers are now studied concretely in primary grades, and much of the number work is interestingly correlated with other study. Plant, animal, and insect life is studied by direct observation in all progressive schools, and collections of compositions and of plain and colored drawings of specimens studied ornament many school-rooms. Field-work in geography is gaining a foothold in America, as it long ago did in Switzerland and Germany. In all studies the same tendencies are manifest. Mechanical memorizing is yielding to rational efforts to develop faculty and intellectual appetite as well as real and interesting knowledge, and the whir of the whip and the cry of the culprit are seldom heard.

In America the beginning of this decided change from the old order of things to the spirit and methods of what has been termed the "New Education," was made in the schools of Quincy, Massachusetts, between 1875 and 1880, while Colonel Francis Parker was superintendent. He came to the work there after an extended experience as teacher and superintendent in his native State, New Hampshire, and in the West, a school experience broken by distinguished service in the Union army during the Civil War. Back of him was a long line of scholarly and teaching ancestry,

Colonel
Parker.

from whom he inherited originality and force. He was still further equipped for the work by two years of special study of philosophy and pedagogy at the University of Berlin. The originality and success of his work at Quincy attracted the attention of educators and teachers all over the country. Many visited Quincy and studied the work done there. It thus exerted wide influence. Colonel Parker was a stalwart in mind and body, and, with the valiant enthusiasm and vigor of a knight of the olden time, he championed his pedagogical idea before teachers' assemblies and effected great changes in theory and practice. He delivered series of lectures on pedagogy, and his *Talks on Pedagogy* is a valuable contribution to our professional literature. He was for many years the efficient head of the Cook County Normal School, Illinois.

What La Salle did for the Christian Brothers and Francke for his teachers has now become a common thing. Wherever there is a widespread interest in elementary instruction there is some provision made for the professional training of teachers. The teachers' seminaries which existed in Germany at the end of the eighteenth century have been so multiplied that there is no teacher, except an old and approved one, without professional training. The brightest pupils in the schools, if they care to become teachers, are permitted to take a normal course after graduating and taking three years of further academic training. The normal studies consume three years more.

In France, Guizot found forty-seven primary normal schools in 1833. He adopted these as state institutions.

Now there are in France one female and one male normal school for nearly every department in the country, one hundred and seventy-two schools in all.

The first normal school in Great Britain was established in Glasgow, by David Stow, in 1827. There is now a large number of training colleges for teachers, and there are professorships of pedagogy in universities both in England and Scotland. England still has, however, a number of apprentice teachers.

In professional training, Italy has made the most astonishing progress of all, having now proportionally more normal schools than any other country in the world.

For a number of reasons, professional training is not yet as generally provided for in the United States as it should be; but the number of public and private normal schools is increasing very rapidly, and no less rapidly is the attendance also increasing. The State of Pennsylvania has thirteen such schools, the largest number, and has also the largest attendance. New York has eleven, and Massachusetts six. Some of the States have only one. But professional training is not limited to the normal schools. The State of New York, especially, makes appropriations for approved academies and colleges that maintain normal classes, and normal classes are found in many such institutions in other States.

Nearly all the large cities have training schools for their young people who intend to teach. High-grade teachers' colleges are springing up, and pedagogical departments are now to be found in a number of the

universities. To supply the lack of professional training and keep alive the corps and professional spirit, teachers' institutes have become recognized pedagogical institutions in both the United States and Canada. They reach all the public school teachers, and have accomplished a vast amount of good.

The first training of teachers consisted of special reviews of the courses of study which the student was expected to teach, study of some accepted method or methods of teaching, and, sometimes, of practice—teaching under supervision. The latter was one of the features in the early Jesuit training of teachers. The first teachers' seminaries and normal schools all offered academic courses of study with instruction in methods of teaching and school management. The Professional Training Courses. academic studies still generally remain in the normal schools, but the character of the professional work has been transformed. The object now is not to make mechanics skilled in certain methods of doing prescribed work, but masters of a difficult and exalted art,—the art of developing boys and girls into men and women of a high type. The study of methods is now subordinated to analysis of studies and of mental functions, and inquiry into principles. Prominent in the courses of study now are psychology, ethics, history of education, scientific pedagogy, including methods of teaching and school management, and systematic training in practical child study. In America the State normal schools always have practice or model schools attached to them.

In 1850 Brown University established a professorship

of pedagogy. One after another of the larger colleges and universities have since done the same. In some of these university schools of pedagogy the work is of a high order and very thorough and comprehensive. Naturally the graduates seek principalships and superintendencies, yet many teach in lower-grade schools. In every way the university work in pedagogy has promoted the interests and standing of the profession.

Froebel's noble contribution to the means of human development did not remain inert. In spite of its unkindly reception in the land of its origin, the The
Kindergarten is winning its way even there. Kindergartens.
In other countries it is rapidly growing in favor, and is gaining recognition as a regular part of the machinery of popular education. In Switzerland, the first country to adopt it, it is nearly everywhere a part of the public school system. In the United States the first Kindergarten was opened by Mrs. Carl Schurz, about 1855, among the Germans in Watertown, Wisconsin. Mrs. Schurz had attended Froebel's lectures in Hamburg. Through Mrs. Schurz Miss Elizabeth Palmer Peabody became interested in the work. Miss Peabody became the great American apostle of the Kindergarten, doing for it in America what Baroness Marenholtz-Bülow did for it in Europe. St. Louis was the first city to adopt it. Philadelphia, Boston, and Milwaukee have also incorporated it into the public school system. In 1870 there were only five Kindergartens in the country. In 1891-92 there were already one thousand and one. Of these, two hundred and seventy-seven were public.

France has been most generous of all in the adoption

of it. Infant schools (*écoles infantine*), as they are called there, take children from four to seven years of age and prepare them for the primary schools. These infant schools are supported entirely by the state. A modification of this school, the mother school, is also supported by the state in communes of two thousand or more inhabitants. The mother school is a sort of combination of nursery and Kindergarten. It takes children from two to six years of age, and cares for them from early morning until evening. This makes it possible to give trained care to the children of the poor and at the same time enable the mothers to go out to service.

XXVII

SECONDARY AND HIGHER EDUCATION

IN Europe secondary education is so directly the outgrowth of the classical schools of the Renaissance that the kinship is evident in all the courses of study. None of the secondary schools, however, have remained unmodified by the development of mathematics and the natural sciences.

In Germany, where the conflict between realism and humanism has been of longest duration and most vigorous, there are two distinct types of secondary schools, the gymnasium and the real school (Real-
schule). In the gymnasium the classical
languages are supreme; while in the real
school the sciences and modern languages receive more
attention at the expense of the classic tongues. The
course in both is nine years. In the gymnasium Latin
is studied throughout the course and Greek six years.
In the real school Greek is not studied at all and Latin
has assigned to it fewer periods than in the gymnasium.

German
Secondary
Schools.

The gymnasial course commonly embraces religion, German, Latin, Greek, French, English, history, geography, mathematics, natural history, physics, writing, and drawing.

The real schools are growing in favor, but their graduates are still debarred from certain courses in the universities, generally from theology and law. For students

who prefer to take technical courses for callings that do not require university training there are secondary schools with the upper classes omitted. These are the progymnasia and the real schools of the second order.

The secondary schools receive most of their support from state and municipal governments, but they are not entirely free. Their most unfortunate feature is that they are based upon and maintain class distinctions. They are not articulated with the popular elementary schools. Parents able and willing to give their boys the advantages of a superior education cannot, if they wish, keep them in the elementary schools after they are eight or nine years of age.

The teachers of the secondary schools are superior men. They are required to spend three years in some university studying philosophy, literature, and the branches they expect to teach, pass an examination, teach a trial year, and devote three years more to pedagogical training in a seminary connected with a university or gymnasium.

In the other Teutonic countries of Europe secondary education is very much as it is in Germany. In Great Britain and the Latin countries it is more exclusively of the classic type.

Other
European
Secondary
Schools.

In Great Britain secondary schools are mostly endowed, and are not free. The most famous of them are the great boarding-schools of England, like Rugby, Eton, and Winchester. The best known of them to Americans is Rugby, because of the magnificent work done there by Dr. Thomas Arnold. These schools have been very conservative, having but

recently modified their strictly classical courses. The system of fagging, in which lower class pupils are obliged to perform menial services for those in higher classes, or forms, as they are called in England, still prevails.

In France secondary education is given in the colleges and lyceums. These institutions are much alike, except that the course in a lyceum is fuller than in a college. They belong to the state system of schools. In the upper classes there is a division of studies allowed on the basis of humanism and realism. The elementary school is also followed by a higher course corresponding somewhat to the continuation, or middle, school of the German cities. It is called the higher primary school (*école primaire supérieure*). This school has not yet become very popular. The attendance in 1897-98 in all France was only about thirty thousand of both sexes. There are higher normal schools with a three-year course for the training of teachers for the secondary schools, of principals for elementary schools, and of superintendents.

In Europe higher education still belongs mainly to the universities, though there are higher schools, as schools of science and of medicine, not connected with regular university organizations. Parallel in importance with the extension of elementary education has been the development of the universities. Though many of them are hoary with age, they have, to an astonishing degree, broken away from the trammels of a hurtful conservatism, remaining true to their noblest traditions. To their own advantage and

European
Higher
Education.

the benefit of society at large, the student bodies have lost many of their ancient privileges and have laid aside some of their barbarous customs. The faculties, too, have been modified. To meet the demands of modern life, the old faculties, especially that of philosophy, have been divided and subdivided, and new faculties have been created. The greatest changes of all have been in the character of the work done. These changes have made prophetic, by more than anticipated fulfilment, the work of Francis Bacon and the revolutionary declaration of Gundling at Halle. The method of the universities now is the laboratory method, even in departments where but a few years ago it seemed impossible of application. In every department of knowledge there is the most enthusiastic and searching investigation, the most minute and painstaking determining of facts, and generalization at once bold and cautious. It has accomplished miracles, and the universities have more than ever before become identified with the active, practical life of the world. Their influence is deeply felt in every phase of school-work, and in almost every form of human activity outside of the school.

In the matter of free investigation the German universities have taken the lead. Among progressive countries, those of Great Britain have been most conservative. Their work is still markedly academic in character. The old French universities were abolished by the Revolution. In the reorganization which followed, when the term "university" was applied to the whole educational establishment, the higher faculties were organized as part of the establishment, but were separately located in differ-

ent cities. The faculties were thus swallowed up in the state organization and were deprived of the privilege of receiving private gifts and endowments. France had no real universities. By the law of 1896 this was changed. It authorized the organization of universities with individual character and importance. It restored the privilege of gift and endowment, though it still keeps the universities under state control. A number now have all the faculties united in one organization, and have assumed new and vigorous life. In every country in Europe, with few exceptions, universities are increasing, sometimes in numbers, always in importance and usefulness.

Nothing better attests the healthfulness and vigor of educational interest in the United States than the chaotic state of secondary and higher education and the financial support they command. The In the United States. schools of these grades are very numerous, and apparently defy accurate classification. They owe their existence to the practical needs and ambitions of the people, and from these they derive their character rather than from any traditional norm. They are, therefore, as varied as are the sections of country in which they exist, and it seems well-nigh impossible to find any educational need which they do not supply. Such enormous sums of money are invested in them as no other country in the world has ever devoted to similar service.

Although there was some public provision made for secondary education as early as the middle of the seventeenth century, especially in Massachusetts, yet up to 1850 there were probably not over a dozen secondary

schools in the United States publicly maintained. The founding of such institutions was left, in the interval, to church organizations and private individuals. The Secondary Schools. These schools were generally called academies. The public secondary schools became known as high schools. About the middle of the nineteenth century the high schools began to multiply with great rapidity. By 1880 the number had increased to nearly five hundred. Between 1890 and 1896 the number of pupils in high schools increased eighty-seven per cent. In 1897-98 there were reported five thousand three hundred and fifteen high schools, with an enrollment of four hundred and forty-nine thousand six hundred pupils. With the exception of the high-grade college preparatory schools, the academies have relatively declined both in numbers and attendance. In some sections they have entirely disappeared.

The first academies and high schools as far as they were strictly secondary, that is, preparatory to higher institutions of learning, were classical schools. The first high school of the "real" type was the English High School of Boston, founded in 1821. Now nearly all secondary schools provide at least two types of courses, classical and scientific. What has diversified the courses of study to the prevailing extent is the fact that there is no fixed standard of higher education and that most secondary schools have performed a double office. They have been both preparatory and supplemental, or continuation, schools. In fact, many of the high schools have not advanced beyond the latter character. In both high schools and academies many people

complete their education. A number of the giants in American history received no culture beyond that afforded them by the old academies.

The work of higher education in the United States is done by colleges, universities, and special professional schools. The nineteenth century began with twenty-four colleges and universities of college rank in existence, and ended with over four hundred colleges and universities. The early colleges were very strictly and narrowly classical. They were mainly founded by religious bodies to prepare scholars for the ministry, and a number had theological seminaries attached to them. The natural sciences received almost no attention at all. Wilson, the ornithologist, who visited Princeton College early in the century, claimed that the professor of science there did not know the difference between a sparrow and a hawk. There was a little illustrative work done in physics. The first college chair in chemistry was established in 1795, at Princeton.

Higher
Education in
United States.

The expansion of knowledge and activity not only caused a rapid increase in the number of higher institutions of learning, but also demanded modifications of the course of study. Harvard commenced an elective system of studies in 1824. The University of the City of New York was organized in 1830 with sixteen departments, half of which were assigned to science and the modern languages. Yale began the Sheffield Scientific School in 1846; and Harvard, the Lawrence Scientific School the year following. About the same time the University of Michigan established two courses of study

for graduation, a classical and a scientific. Similar changes followed rapidly in other institutions and were adopted by new ones. Nearly all colleges now have the two kinds of courses, and a great many have a number of elective groups of studies preparing for graduation, besides admitting irregular students to elective studies without graduation.

More than a fourth of the higher institutions have been incorporated as universities, but many are universities more in the hope and ambition natural to a new country than in reality. Such institutions have existed for years with a mere handful of students and of a grade inferior to that of a good academy. A number of the older colleges and universities, however, have developed into genuine universities of a high order and new ones have been established. They have professional and post-graduate courses of study under able professors. Some of them, because of the wealth of their endowment and the breadth and energy of the American spirit which they represent, promise soon to be the foremost institutions of learning in the world. All the universities, though differing from one another in organization and entrance conditions, have a distinctly American character plainly separating them from the universities of the old world. They are a new product of a new civilization.

In the States founded after the adoption of the national constitution there are colleges and universities founded and supported by the States. This is the case also in some of the older States. Most of these institutions, however, have been founded by religious bodies and individuals. Money has been literally showered

upon the most favored. In nothing else has American wealth been more generously displayed. Mr. Rockefeller has given over three million dollars to Chicago University ; Jonas G. Clark gave two millions to Clark University, Massachusetts ; Paul Tulane, two and a half millions to Tulane University, Louisiana ; Johns Hopkins, three and a half millions to the Johns Hopkins University, Baltimore ; and Leland Stanford, five millions for the university in California named after his son, while his wife has since added many millions more in money and other property. The annual benefactions to Harvard amount to nearly or quite a million dollars, and to a number of other universities nearly as much. It is estimated that the sum donated for higher education in 1899 amounted to more than seventy million dollars.

One of the best evidences of health in modern social life is the extent and high character of the special training for callings not included among the traditional learned professions. Every civilized country to-day has well-equipped schools to educate for architecture, agriculture, civil, mining, and electrical engineering, designing, and military and naval command. Such schools are generally termed polytechnic. In Germany, which leads other European countries in this type of education, they are called technical high schools.

Technical
Education.

In Great Britain and the United States it is common to co-ordinate technical courses of study with other college and university courses, thus giving them equal dignity.

The first technical school of this character in the United States was the West Point Military Academy,

established in 1802. The first civil institution that could claim rank with it was the Rensselaer School, in New York, established in 1824. It first trained particularly for agriculture, but had a course in engineering as early as 1835. It soon had many rivals and imitators.

The national government has given much encouragement to the schools in agriculture. In 1862 an act was passed and approved by President Lincoln offering thirty thousand acres of land for every senator and representative in its representation in Congress to every State that would undertake to establish and maintain an agricultural college. All the States in the course of time accepted the offer. As was designed in the act, other technical courses have been added. The whole area of land appropriated was nine million six hundred thousand acres.

XXVIII

OTHER CHARACTERISTIC DEVELOPMENTS

THE efforts to reach and benefit every phase of human life with educational agencies are so varied that it is almost impossible to give a clear and consistent account of them in a brief narrative. Industrial education, as distinguished from manual training with main reference to its culture value and from higher technical training, worthily claims some attention.

Industrial
Education.

There never was such thoughtful earnestness in life as now. The products of industry have passed from simplicity and crudeness to complexity, accuracy, and finish. The ignorant, unskilled, and morally weak were never so much at a disadvantage. It is, therefore, a wise charity that seeks to train youth to meet well the demands of productive activity.

In line with the attempts at industrial education made by Francke in Germany, by Kinderman in his Bohemian parish, and by Pestalozzi in Switzerland, industrial schools have sprung up in great numbers in Europe and America, and in other countries as well. All over Europe there are industrial night schools, and apprentice schools for the different trades to take the place of the old system of apprenticeship. These schools have courses of study combined with the work in the trades. In this matter the United States is by no means behind.

The most famous schools of the kind in this country are the school for Indians and colored youth at Hampton, Virginia; Booker Washington's Normal and Industrial School for colored youth, at Tuskegee, Alabama; and the great government schools for Indians, like the one at Carlisle, Pennsylvania. A number of the States, too, have adopted the industrial school as a means of reforming perverted youths.

The humane spirit deeply ingrained in our present civilization has established many schools for the education of those defective either physically or mentally. Schools for the deaf and dumb and for the blind are to be found in almost every land in Christendom.

The first systematic effort to instruct deaf mutes was made as early as 1550 by a Benedictine monk in Spain, Pedro Ponce de Leon. A number of learned men after him took deep interest in the work. The first school for deaf mutes open to the public was established in Paris, in 1760, by the Abbe de l'Épée. Aided by the work done before, he devised a system of signs, which is the basis of the sign systems used to-day.

In 1774 Heinicke founded a school at Leipsic. In his school the pupils were taught to speak and to read the movements of the lips. His method was an outgrowth of one devised by John Conrad Amman, a Swiss physician, who lived in Amsterdam.

The pioneer instructor of deaf mutes in the United States was Rev. T. H. Gallaudet. Through his influence the first school was established, in Hartford, Connecticut. He was appointed its first director. The State Legisla-

Schools for the
Deaf and
Dumb.

ture appropriated money for it, and the national government contributed twenty-three thousand acres of land. This school was founded in 1815, with the title, "The Connecticut Asylum for the Education of the Deaf and Dumb."

The nineteenth century began with four such schools. Now there are over sixty in this country alone. They are mostly State institutions. In Europe, too, they are generally maintained by the governments. Usually industrial training is combined with the instruction. In Washington there is a "National Deaf-Mute College" with a regular college curriculum. There are still two systems used, one resembling Heinicke's and the other De l'Épée's.

The first school for the blind was founded in Paris, in 1791, by Valentine Haüy. This school became the "Royal Institution of France" through the sanction and support of the king. Other ^{For the Blind.} European countries soon established similar institutions. The first school of the kind in the United States was the Massachusetts Institution for the Blind. It was founded in 1832 through the efforts of S. G. Howe, and was also managed by him. He was a philanthropic physician. He also established a school for feeble-minded. There are now more than thirty schools supported by different States. As is the case in deaf-mute schools, intellectual and industrial training are combined. It is in institutions of this sort that teaching best reveals its possibilities as a fine art. No more remarkable educational results have ever been accomplished than in the culture of Laura Bridgman and Helen Keller. In the education of

the blind this country excels all others both in the extent and the thoroughness of the training.

Most plainly of all, schools for the feeble-minded evidence the effort of modern education to give to all men and women the highest possible development. Education now means patient and enthusiastic devotion to the making of life. Sixteen States have provided schools for feeble-minded children. The founder of the system of instruction was also a Frenchman, Edouard Seguin. Much of his work, however, was done in the United States. He died in New York, in 1880. Pupils admitted to the schools are carefully examined as to the power of their bodily organs. According to their needs and capacities each one of their organs is then perseveringly trained with appropriate exercises to make it as nearly as possible normal in its functions. On this training is based the social, moral, and intellectual culture which they receive. Their education is necessarily largely industrial.

Among the social revolutions of the eventful nineteenth century none will stand more to its credit than the changed status of womanhood. Though it involves what appear to be objectionable and perilous features, no other change has proved so immediately satisfactory and beneficial. It necessarily constituted a new educational demand. Outside of the convents, and generally within, prior to 1800, there was seldom more than an elementary education vouchsafed to girls. As late as 1888 only ten per cent. of the pupils in French secondary schools were girls. In the English secondary schools at the same time the number did not exceed thirty per

cent. In 1889 there was not a woman matriculated in a German or Austrian university, though in the latter country they were admitted to certain lectures.

Because of the high valuation it has accorded to the individual and because of its devotion to the principle of individual opportunity, the United States has led the world in the emancipation and generous education of women. The first notable leader in the work of increasing woman's educational advantages was a Vermont lady, Miss Emma Hart, afterwards Mrs. Willard. She opened a seminary for young ladies at Middlebury, Vermont, in 1800. She afterwards founded the famous Troy Female Seminary. By means of a published address she influenced the New York legislature to appropriate money for a number of high-grade girls' schools. Her work and writing also led to the founding of institutions like her own in a number of States. Miss Catherine Beecher, of Connecticut, shares with her the credit of giving life to the movement that scattered academies for young ladies all over the Union. She founded an academy at Hartford in 1822, and a similar one afterwards in Cincinnati. She finally became a leader in an organization formed to advance the educational interests of women.

Higher
Education of
Women in
America.

The first school assuming to itself the dignity of a college for women was the Mount Holyoke Female Seminary. It was founded by Mary Lyon, at South Hadley, Massachusetts, in 1836. In 1861 Vassar was founded, and furnished the type for the female colleges of the highest grade. It was followed in its class by Wellesley, Smith, and Bryn Mawr. The last named is liberally

endowed and provides and encourages post-graduate work.

The first attempt to conduct a public secondary school for girls was made in Boston in 1826. It failed because the patronage exceeded the support. It was reorganized successfully in 1852. Philadelphia established its Girls' High School in 1840. Most high schools are coeducational. The number of girls in the high schools at the present time largely exceeds that of the boys.

There are now hundreds of seminaries and colleges for women in the United States, but in addition to these a large number of colleges and universities have opened their doors to men and women alike. The first college to win for itself a crown of honor by doing this was Oberlin College, Ohio. It was opened as a coeducational institution in 1833.

In the United States, too, there is no profession for which a woman may not receive university training. Miss Elizabeth Blackwell opened the way for the study of medicine. After having been refused admission to medical courses in Philadelphia, New York, and Boston, she gained permission to study medicine in Geneva College, New York, in 1847. About 1870, ladies began to be admitted to law schools. Washington University, St. Louis, was the first to grant the privilege.

England leads Europe in the matter of female education. In 1804 there was opened a school in Prussia to educate women as teachers, but still Germany has continued to be one of the slowest countries to yield superior educational facilities to women. In 1848 Queen's College was founded in London to educate

women for teachers and governesses. It was soon followed by Bedford College, a similar institution. After that not much progress was made for many years. The great impetus to female higher education in Great Britain was finally given by Miss E. Davies, who published a powerful work on the subject in 1866. The following year Cambridge professors commenced to lecture, though without official sanction, to women who rented a house for the purpose. For this work Girton College, the first female college in Europe, was opened in 1872, and women were soon granted degrees. One after another of the countries of Europe have since followed the examples set by the United States and England, and opened their universities to women. In 1880, too, France made female secondary education a part of her public system.

Higher
Education of
Women in
Europe.

In 1873 the University of Cambridge, in England, inaugurated a movement that has extended the benefits of higher learning and intellectual method to many thousands who otherwise would be excluded. The movement is known as University Extension. It was wonderfully successful from the beginning. The object is to reach people unable to take the regular university course. Arrangements are made in towns for a series of lectures by a trained university lecturer. At a very moderate expense people are admitted to the course irrespective of age, sex, or previous training. The lecturer gives to each a syllabus of the lectures, and a series of questions upon each. Those who desire so to do, answer these questions in writing.

University
Extension.

Before each lecture after the first, a period is spent with the lecturer in discussing the previous lecture. At the end of the series there is an examination. All who pass receive a proper certificate.

A few years after Cambridge began the work, a specially organized Extension Society in London took it up. Now all the universities in Great Britain are engaged in it, and the students are numbered by tens of thousands.

Individuals connected with Johns Hopkins University introduced the movement into America in 1887. Societies have been formed for it, the most important of them being the American Society of Philadelphia, and the University of Chicago has made it a special department. It is rapidly spreading and growing in popularity. The New York legislature appropriates money liberally for a State system of extension.

Similar work of a more popular character is done in the evening schools of France, in New York, and in other States and countries as well.

Another educational movement equally popular and useful was instituted by Dr. J. H. Vincent, a bishop in the Methodist Church, and Lewis Miller, a wealthy manufacturer in Ohio. In 1874 they organized a summer assembly to convey systematic instruction to Sunday-school teachers. The assembly meets annually in beautiful grounds on Chautauqua Lake, in the southwestern part of New York. In 1878 there grew out of it the "Chautauqua Literary and Scientific Circle." It prescribes a definite four years' course of reading, each year's work complete in itself. The course is designed to take the place of a

The
Chautauqua
Movement.

college training with those unable to attend college. It is pursued by local circles all over the country. Between two and three hundred thousand begin the course every year. A great many of these complete it and receive the diplomas. There has been added a "College of Liberal Arts" with an able faculty. The work is done by correspondence. After rigid examinations, it grants the usual college degrees.

The Chautauqua Assembly has many imitators, and has helped to give popularity to summer schools of other kinds.

Modern educational ideals and methods have developed a wonderful desire to understand the mysteries of the unfolding life of the children. The interest in the observation of child life has grown directly out of the work of Pestalozzi and Froebel. More than thirty years ago there were organized efforts to study children made by teachers' associations in Germany. Probably the most definite im-
The
Child Study
Movement.
 pulse to the movement in Germany was given by Preyer, professor of physiology at Jena. In 1881 he published an account of the development of his own child in the first years of its life.

The first great leader of the movement in the United States was Dr. G. Stanley Hall. He is a man to whose thorough education some of the best institutions in America and Germany have contributed. He was for a number of years professor of psychology and pedagogy in Johns Hopkins University, and was made president of Clark University at the time of its opening, in 1887. Through his students, publications, public addresses, and

syllabi sent out to teachers he has awakened a widespread interest in child study and given it intelligent direction.

Associations for the conduct and promotion of child study are now very numerous in cities, counties, and States. A deep impression has already been made by it on the character of school work, and there is as yet only a prophecy of the good that will yet be accomplished.

XXIX

SCHOOL SUPERVISION

MODERN development of education has made it a great and complex social engine, and modern educational ideals and theories have made teaching one of the most difficult of arts. That the work may be reasonably successful it is necessary that there be thorough professional training of the teachers and wise supervision of the schools. Progress in the thoroughness and effectiveness of supervision has fairly kept pace with progress otherwise, though unequally so in different countries.

The general supervision of the school system of England is entrusted to a committee of the Privy Council. The oversight of the committee is confined to elementary schools. It is rendered effective in the character of the work done in the schools by means of a system of inspectors. The country is divided into school districts. The inspectors and assistant inspectors of each district are under the direction of a senior inspector. All schools receiving state support may be visited and examined at any time. The inspectors are men of thorough professional training.

In England.

The organization in France is very complete. All the schools from the lowest to the highest are incorporated into the University. At the head of the whole system is the Minister of Public Instruction. He is assisted by the Higher Council of Public

In France.

Instruction. This includes three special bodies representing the three departments of education,—primary, secondary, and higher.

All of France, that is, the University, speaking educationally, is divided into seventeen academies. At the head of each academy is a rector, assisted by a council. This council has special care of secondary and higher education.

The academies embrace a number of departments. The prefect of the department is also at the head of its educational organization, assisted by an inspector of the academy, a trained school man. There is a departmental council of instruction, and this has special care of the elementary schools.

The sub-divisions of the departments, the arrondissements, also have an executive school officer and a council. Last of all, every commune has a board in charge of its school. At the head of this board is the mayor.

Every German state manages its own school affairs. They are all similar in organization. Prussia will serve to describe all. It has a minister of public instruction.

He represents educational interests in the
In Germany.

Reichstag, or parliament, and has supervision over all the schools in the kingdom, whether public or private, and of all grades. The country is divided into provinces, these into governments, and each government into districts. Every province has a board of education, with the president of the province at its head. He always has a professional school man as an assistant. The provincial board has charge of the higher grade secondary schools and the normal schools.

The governments also have school boards. These have charge of the elementary schools, the progymnasia, and the real schools of the second class.

Each district, too, has a school board and an inspector,—an important official, who closely supervises the work of the schools. There is, lastly, a local board in charge of each school. This has charge of the property, but has little voice in the conduct of the work.

The organization of education in the United States leaves much to be desired. In this, more than in anything else, the heterogeneous character of the schools works a positive disadvantage.

In the
United States.

There is no national organization whatever. The largest units are the States. The national government exercises no supervision nor control except over its own schools,—those of the District of Columbia, the military and naval schools, and the Indian schools. At the petition of the National Teachers' Association, however, the government in 1867 established the office of Commissioner of Education. It is his business to collect statistical and other information from all over the country and from without, and distribute this in published reports, thus keeping all portions of the country in touch with one another and unifying school effort. The present commissioner, Dr. William T. Harris, one of the ablest of all our school men, has done the country great service by means of his reports and the excellent pedagogical works which he has published or edited.

The State organizations are good except as they are weakened by lack of proper supervision in the counties, townships, or districts. They exercise no control over

private schools, whether secular or religious. When colleges and universities are not State institutions, they come under State direction only in this, that the State prescribes the conditions under which they may be chartered and privileged to grant degrees. All the States and territories, with the exception of one of each, have superintendents. The functions of these officials vary in the different States. In some they receive the reports of the subordinate school districts, report to the legislature, interpret the school law, apportion State appropriations, and endeavor to direct school legislation. In others, with the help of a proper board, they control almost the entire school machinery of the State, having charge of all examinations for teachers, of the institutes, and of the funds. In one State the superintendent appoints the superintendents of the counties.

Many States supplement the office of the superintendent with a board of education. These boards sometimes have charge of the examinations, sometimes of the funds, and sometimes of a special department of educational work, as is the case in Minnesota. It has a Board of Commissioners on Preparatory Schools. The State of New York has a university organization somewhat resembling that of France. It comprises the incorporated colleges and academies and some academic departments in the public schools. It is subject to the control and inspection of a governing body known as "The Regents of the University of the State of New York."

The organization of the city schools is very good. Nearly every city in the country numbering five thousand

inhabitants or over has a superintendent, and many cities or boroughs less in population make similar provision for the organization of their schools.

Inadequacy of supervision is to be found in the counties, townships, and districts. It is most disastrous in the rural districts, because a major portion of the teachers there lack professional training. A large majority of the States have county organizations, but not all of these have county superintendents. Some have county boards of examiners. The county superintendents are in some States appointed by the governor; in others, by county boards of education; in others, by the school directors; in still others, by popular vote. In some States they have a large sphere of activity, controlling almost independently the conduct of institutes and the examination and licensing of teachers. In other States they are merely the executive agents of the State authorities. In some States the office exerts little direct influence on the schools, because the superintendent devotes himself strictly to office work, seldom or never visiting the schools. The extent of counties, too, often weakens the power of the office.

In the New England States the units of organization are the towns (townships) and the cities. In Massachusetts, for instance, there are no county school officials. Each town or city has an educational committee of three or some multiple of three. This committee is salaried and has control of the schools and the teachers. The system by no means secures professional supervision of the work done. To remedy this the towns or, under certain conditions, combinations of two or more towns,

may order their school committees to employ superintendents. The cities all do this. The State superintendent also appoints four agents who visit schools. They, however, exercise no authority. The system is the inheritance of the old New England township system of government which has done so much for the development of intelligent democracy in America. Several other States, following the New England model, have similar systems with modifications. Michigan has a township system with township inspectors.

XXX

LATER PEDAGOGICAL LITERARY ACTIVITY

AMONG the many proofs of the growth of interest in education there is none better than the extent and high character of the pedagogical literature now accumulating. A bare bibliography of each year's publications would fill a respectable volume. In the Central Pedagogical Library at Leipzig there are more than sixty-seven thousand books and pamphlets. In the Musée Pédagogique at Paris, founded in 1879, there are more than fifty thousand books. In the library of the Bureau of Education at Washington there are over fifty thousand books and one hundred and fifty thousand pamphlets. It would be interesting to make an analysis of this vast literature, and heap up, as the miser does his gold, the treasures of pedagogical thought which it contains; but in a work of this character it is not possible to do this. It is barely possible to mention such works, not already discussed, as have been most prominent in awakening pedagogical interest in America and in directing professional study.

Productive literary activity on educational subjects is greatest in Germany. The Germans also exercise a deeper influence on American pedagogic thought than any other people beyond the water, yet comparatively

little of their pedagogic literature reaches the American teaching public directly. Great works like Baumeister's *Handbuch der Erziehung* or the writings of Dittes and Von Raumer exert influence only indirectly through teachers who have studied in Germany or who are familiar with the German language, through furnishing material for English and American writers, or through partial translations. Preyer's studies of childhood have been translated, as also some of the most pronounced Herbartian literature, like Lange's *Apperception* and Rein's *Outlines of Pedagogy*. One of the most active of the Herbartian translators has been Dr. De Garmo, now professor of pedagogy in Cornell University. Pestalozzi and Froebel have fared well in translation. Rosenkranz's able work on the *Philosophy of Education* has also been translated.

Among the French writers one only, Professor Gabriel Compayré, of the normal school at Fontenay-aux-Roses, has found a large reading public among American teachers. His *History of Pedagogy* and *Psychology Applied to Education* have been widely studied.

For a time, the most famous British work was Herbert Spencer's *Education*. It is a helpful book for clear-headed students, and has done noble service. Spencer was a learned and well-disciplined disciple of the "education according to Nature" school of which Rousseau had been the brilliant apostle in the preceding century. Joseph Payne's lectures, and Dr. Bain's *Education as a Science* have also secured a strong hold. The most generally useful of all, probably, have been the historical writings of R. H. Quick and of Professor Laurie, of the

University of Edinburgh. Quick's *Educational Reformers* and Laurie's *Rise of the Universities* and *Pre-Christian Education* have proved very valuable. Side by side with these also must be ranked the *Lectures on Teaching* and the *Art of Questioning* by school inspector J. G. Fitch.

In the United States the first great accumulation of pedagogical literature of high character and from many sources was made and published in the *American Journal of Education*. The numbers of this publication now form a large library. It was founded by Henry Barnard, a man who did for Connecticut what Horace Mann did for Massachusetts. The first systematic treatise on pedagogy that could be used as a text-book and came into general use was prepared by David P. Page, first principal of the first normal school in the State of New York. A pioneer work on *School Economy* was published by J. P. Wickersham, who was for many years superintendent of the schools of Pennsylvania. It was the forerunner of a number of excellent works devoted to this subject or some phase of it. Dr. Wickersham also wrote a comprehensive history of the growth of education in the State of Pennsylvania. Highly trained and enthusiastic men and women are constantly increasing the supply of books helpful to the teacher, and the number of first-class professional periodicals is very large.

One of the best sources of our present pedagogical literature is found in the increasing number of departments of pedagogy in the universities. Not only is there increase of number, but there is also wonderful improvement in the scope and character of the work.

The vast and rapidly-increasing mass of professional literature accessible to the teacher is one of the best evidences of the breadth, depth, and lofty character of present educational interest. *Conclusion.* Never before did it reach so high a tide. So extensive has been the development of educational effort that it is not possible to trace it fairly everywhere. Nothing, for instance, has been said of Japan, and yet Japan now has a thoroughly-organized, modern, and progressive system of education. The colonies of the British empire, too, which have been barely mentioned, rank among the foremost peoples educationally. Wherever, indeed, the influence of modern civilization has extended, there schools and colleges spring up and flourish.

Human life now has attained such breadth of organization, such complexity of activity, such depth of generosity and height of aspiration as to present at least a decided prophecy of its ultimate exalted brotherhood. Herein lies the deepest inspiration of modern education. No institution better reveals its truest and best character than the school for the feeble-minded. This institution is society with a tender heart reaching down a strong right hand to shattered fragments of humanity to lift them up, seeking with utmost patience to perfect as nearly as possible their growth in manhood, usefulness, and happiness. For the true end of education is to make men men and women women, magnificent in mind and body, noble of heart, and royal in character, ready to respond, at their own initiative, purely and righteously to every challenge which private and social life brings to them from day to day.

There is much yet to be accomplished. A comparison of the real with the ideal causes the heart to sink. Every stage of educational growth, like every stage of social development, is to be found illustrated somewhere. The crude and antiquated exists sometimes side by side with the most modern and best. But the marvellous changes for the better that are now so rapidly taking place are sufficient to keep alive abundant hope for the future.

HISTORICAL SUMMARY

Lancaster opened a monitorial school in London . . .	1798
West Point Military Academy established . . .	1802
Pestalozzi's school at Yverdun opened . . .	1805
University of France established . . .	1806
Emma Hart's seminary for ladies at Middleburg, Vermont, opened . . .	1808
Herbart made professor at Königsberg . . .	1809
State superintendency established in New York . .	1812
War between United States and England . .	1812-1814
Napoleonic wars ended . . .	1815
Connecticut asylum for deaf and dumb established .	1815
First "real" high school in the United States opened in Boston . . .	1821
Elective system begun at Harvard . . .	1824
Rensselaer technical school established . . .	1824
Education nationalized in Ireland . . .	1831
Massachusetts institution for the blind opened . .	1832
Oberlin College opened as a coeducational institution .	1833
State free-school law enacted in Pennsylvania . .	1834
Mount Holyoke College founded . . .	1836
Kindergarten opened at Blankenburg by Froebel . .	1837
Normal school opened at Lexington, Massachusetts .	1839
S. S. Green made professor of didactics in Brown Uni- versity . . .	1850

First Kindergarten opened in the United States by Mrs. Schurz	1855
National land appropriations made for agricultural colleges	1862
United States Bureau of Education established	1867
Education nationalized in England	1870
Girton College, England, opened	1872
University extension movement begun	1873
Chautauqua Assembly established	1874
Education made compulsory in Italy	1877
Education made compulsory in France	1882

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